NORTH POWERS FERRY ROAD - PHASE 1

5280 N. POWERS FERRY RD
SANDY SPRINGS, GA 30327

FOR

CITY OF SANDY SPRINGS

1 GALAMBOS WAY
SANDY SPRINGS, GA 30328

SUBMITTAL SET

PREPARED BY:

PLANNERS AND ENGINEERS COLLABORATIVE
SITE PLANNING ▫ LANDSCAPE ARCHITECTURE ▫ CIVIL ENGINEERING ▫ LAND SURVEYING
▫ 350 RESEARCH COURT ▫ PEACHTREE CORNERS, GEORGIA 30092 ▫ (770) 451-2741 ▫ FAX (770) 451-3915 ▫

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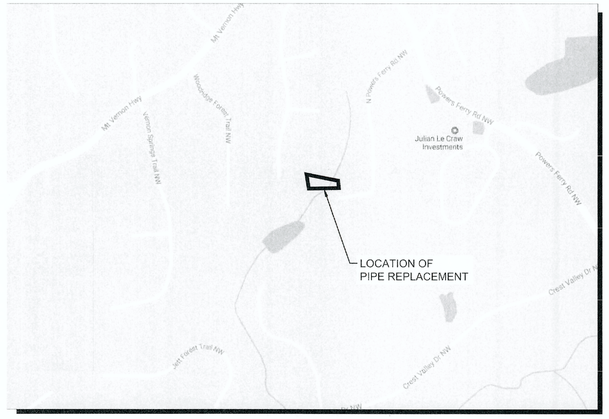
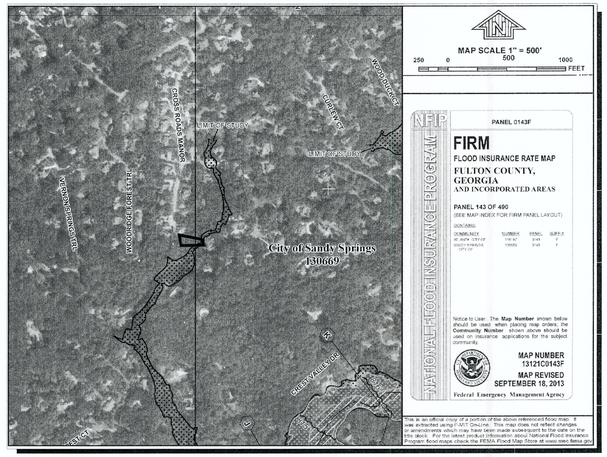
SHEET INDEX	
SHEET NO.	SHEET NAME
C0.00	COVER SHEET
C0.01	STANDARD SPECIFICATIONS & NOTES
C1.00	EXISTING CONDITIONS
C2.00	GRADING & UTILITY PLAN & PIPE PROFILE
C3.00	EROSION & SEDIMENT CONTROL PLANS
C3.01 - C3.02	EROSION & SEDIMENT CONTROL DETAILS
C4.00 - C4.02	CONSTRUCTION DETAILS



SITE LOCATION MAP

NOT TO SCALE



FEMA FIRM MAP

FEMA FIRM PANEL NO.: 13121C0143F

NOT TO SCALE

SITE INFORMATION

1. TOTAL AREA OF DISTURBANCE 0.08 ACRES.
2. BOUNDARY & TOPOGRAPHIC INFORMATION PROVIDED BY PLANNERS & ENGINEERS COLLABORATIVE DATED 11/04/2016.
3. THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR FULTON COUNTY, GEORGIA AND INCORPORATED AREAS, COMMUNITY PANEL NUMBER(S) 13121C0143F, EFFECTIVE DATE 09/18/2013 WAS EXAMINED AND NO PORTION OF THE PROPERTY SHOWN HEREIN WAS FOUND TO FALL WITHIN A DESIGNATED FLOOD ZONE "A" (AREAS OF 100-YEAR FLOOD) OR SPECIAL FLOOD HAZARD ZONE (AREAS OF 500-YEAR FLOOD).
4. THERE ARE STATE WATERS LOCATED ON THE PROJECT SITE.
5. THERE ARE NO KNOWN WETLANDS ON THIS SITE
6. THE ORTHOMETRIC HEIGHTS (ELEVATIONS AND CONTOURS) SHOWN HEREON WERE DETERMINED BY A COMBINATION OF FIELD RUN SURVEY BY PLANNERS & ENGINEERS COLLABORATIVE DATED 11/04/2016 AND FULTON COUNTY GIS.

SITE DATA

ADDRESS: 5280 N. POWERS FERRY RD
SANDY SPRINGS, GA 30327

CONTACT INFORMATION:

ENGINEER:	NEIL SCHAAP, P.E. PLANNERS AND ENGINEERS COLLABORATIVE	OWNER:	CITY OF SANDY SPRINGS
ADDRESS:	350 RESEARCH COURT PEACHTREE CORNERS, GEORGIA 30092	ADDRESS:	1 GALAMBOS WAY SANDY SPRINGS, GA 30328
PHONE:	770.451.2741	PHONE:	(770) 730-5600
EMAIL:	NSCHAAP@PECATL.COM		

24 HOUR CONTACT:
CITY OF SANDY SPRINGS
770-730-5600

Sandy Springs, GA
WTE OCT 07 2019
Permitted
FOR Director
Community Development Department

NORTH POWERS FERRY ROAD - PHASE 1
A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
1 GALAMBOS WAY
SANDY SPRINGS, GA 30328
PHONE: (770) 730-5600

RECEIVED
PERMITS DEPT
SEP 26 2019
CITY OF SANDY SPRINGS

LAND LOT 17
3rd DISTRICT
CITY OF SANDY SPRINGS
FULTON COUNTY
GEORGIA

"WE PROVIDE SOLUTIONS"
PLANNERS AND ENGINEERS COLLABORATIVE
SITE PLANNING ▫ LANDSCAPE ARCHITECTURE ▫ CIVIL ENGINEERING ▫ LAND SURVEYING
▫ 350 RESEARCH COURT ▫ PEACHTREE CORNERS, GEORGIA 30092 ▫ (770) 451-2741 ▫ FAX (770) 451-3915 ▫

REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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COVER SHEET

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

GEORGIA REGISTERED No. 34205 PROFESSIONAL ENGINEER NEIL M. SCHAAP
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C0.00
SHEET

PWFR-0003 R1
5280 N Powers Ferry Rd
FILE

ALL WORK SHALL BE DONE IN ACCORDANCE WITH GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS, APPROVED APRIL 18, 2013; AND GDOT CONSTRUCTIONS STANDARDS AND DETAILS, LATEST VERSIONS. SPECIFICATIONS USED ARE NOT LIMITED TO THE SPECIFICATIONS LISTED ON THE FOLLOWING PAGES.

CLEARING AND GRADING

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STAND SPECIFICATIONS FOR THE CONSTRUCTION OF TRANSPORTATION (GDOT) SYSTEMS, CURRENT EDITION, AND SUPPLEMENTS THERTO, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
2. ALL KNOWN UTILITY FACILITIES ARE SHOWN SCHEMATICALLY ON PLANS AND ARE NOT NECESSARILY ACCURATE IN LOCATION AS TO PLAN OR ELEVATION. UTILITY FACILITIES SUCH AS SERVICE LINES OR UNKNOWN FACILITIES NOT SHOWN ON PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY UNDER THIS REQUIREMENT. "EXISTING UTILITY FACILITIES" MEANS ANY UTILITY THAT EXISTS ON THE PROJECT IN ITS ORIGINAL, RELOCATED OR NEWLY INSTALLED POSITION. ALL SPECIFIC ITEMS IN THE DETAILED ESTIMATE ARE TO BE REMOVED OR RELOCATED TO CLEAR CONSTRUCTION IN ADVANCE O F THE WORK. DISRUPTION TO SERVICES OUTSIDE THE HOURS OF 9:00 AM AND 4:00 PM REQUIRE PRIOR APPROVAL BY THE CITY OF SANDY SPRINGS.
3. UTILITY WORK COORDINATION WILL BE REQUIRED AS PART OF THIS CONTRACT. THE CONTRACTOR WILL BE REQUIRED TO USE THE ONE-CALL CENTER TELEPHONE NUMBER 811, FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES. THE CONTRACTOR'S ATTENTION IS CALL TO SUBSECTION 105.06 OF THE GDOT STANDARD SPECIFICATIONS "COOPERATION WITH UTILITIES."
4. THE FOLLOWING UTILITIES HAVE FACILITIES IN THE PROJECT AREA:

   ATLANTA GAS LIGHT (SOUTHERN COMPANY GAS)
   CONTACT: GINNNY MAULDIN-KINNEY (404) 584-3176

   FULTON COUNTY WATER AND SEWER SEWER
   CONTACT: ABDUL AKBAR (404) 612-7518

   GEORGIA POWER COMPANY
   CONTACT: DAN EVERITT / (404) 506-2889

5. THE TOTAL EARTHWORKS QUANTITY SHOWN ON THE PLANS FOR CLEARING AND GRUBBING IS FOR INFORMATION ONLY. THE CITY OF SANDY SPRINGS PUBLIC WORKS DEPARTMENT ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY, THE CONTRACTOR SHALL INCLUDE GRADING WORK AS PART OF THE BID PRICE FOR GRADING COMPLETE AND IT SHALL BE HIS OR HER RESPONSIBILITY TO DETERMINE THE ACTUAL EARTHWORK QUANTITY TO BE GRADED. NO CLAIMS WILL BE CONSIDERED FOR EXTRA COMPENSATION IF THE CONTRACTOR RELIES ON THE QUANTITY SHOWN ON THE PLANS. CLEARING AND GRUBBING ON THIS PROJECT IS LIMITED TO THE ACTUAL CONSTRUCTION LIMITS UNLESS DIRECTED BY THE ENGINEER. COST FOR CLEARING AND GRUBBING SHALL BE INCLUDED IN THE BID PRICE FOR GRADING COMPLETE.
6. THE CONTRACTOR SHALL STRICTLY ADHERE TO DUST CONTROL REGULATIONS. ALL AREAS SUBJECTED TO DUST FORMATION MUST BE PERIODICALLY WATERED SUFFICIENT TO RETARD DUST, NO SEPARATE PAYMENT WILL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT.
7. THE TOTAL AREA SHOWN ON THE PLANS FOR GRASSING IS FOR INFORMATION ONLY. THE CITY OF SANDY SPRINGS ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY. THE CONTRACTOR SHALL INCLUDE IN THE BID PRICE FOR GRASSING, AND IT SHALL BE HIS RESPONSIBILITY TO DETERMINE THE ACTUAL AREA TO BE GRASSED. NO CLAIMS WILL BE CONSIDERED FOR COMPENSATION IF THE CONTRACTOR RELIES ON THE AREA SHOWN ON THE PLANS.
8. THE TYPE OF GRASS OR SOD USED ON THIS PROJECT WILL BE REQUIRED TO MATCH ANY TYPE OF GRASS OR SOD WHICH MAY BE PLANTED AND GROWING ON THE ADJACENT LAW. I.E. BERMUDA SOD FOR BERMUDA SOD, ZOYSIA FOR ZOYSIA, ETC. NO SEPARATE PAYMENT SHALL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT.
9. INGRESS AND EGRESS SHALL BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES. REFER TO SUB-SECTION 107.07 OF THE GDOT STANDARD SPECIFICATIONS.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH SUITABLE BORROW MATERIAL FOR THE PROJECT AND DISPOSE OF ANY UNSUITABLE OR WASTE MATERIAL.
11. HORIZONTAL CONTROL IS BASED UPON GEORGIA STATE PLANE COORDINATE SYSTEM.
12. IN THE EVENT A DRIVEWAY IS DAMAGED DUE TO CONSTRUCTION, THE DRIVEWAY SHALL BE REPLACED, IN KIND, I.E. ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND BRICK PAVERS FOR BRICK PAVERS. EXCEPT EARTH AND GRAVEL DRIVEWAYS SHALL BE REPLACED WITH ASPHALT TO THE CONSTRUCTION LIMITS. DRIVEWAYS CONTAINING BRICK PAVERS SHALL BE CONSTRUCTED USING GDOT SPECIFICATIONS. THE DRIVEWAY LOCATIONS INDICATED ON THE PLANS ARE FROM THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL CONSTRUCT NEW DRIVEWAYS TO MATCH ACTUAL FIELD LOCATIONS OF EXISTING DRIVEWAYS WHERE THEY ARE NOT IN CONFLICT WITH RULES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO MAKING ANY REVISIONS SUCH AS TO LOCATION, WIDTH AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. WHERE REQUIRED, THE DRIVEWAY SHALL BE PAVED AS FOLLOWS:

ASPHALTIC DRIVES

RESIDENTIAL:
1.5" RECY. ASPHALTIC CONCRETE, 9.5mm SUPERPAVE,
GP 2 ONLY, INCLUDING BITUM. MAT'L & H. LIME
6" GRADED AGGREGATE BASE

COMMERCIAL:
1.5" RECY. ASPHALTIC CONCRETE, 9.5mm SUPERPAVE,
GP 2 ONLY, INCLUDING BITUM. MAT'L AND H. LIME
2" RECY. ASPHALTIC CONC. 19mm SUPERPAVE, GP 1 OR 2,
INCLUDING BITUM. MAT'L AND H.LIME
8" GRADED AGGREGATE BASE

CONCRETE DRIVES

RESIDENTIAL: 6" CONCRETE VALLEY GUTTER
6" CONCRETE DRIVEWAY

COMMERCIAL: 8" CONCRETE VALLEY GUTTER
8" CONCRETE DRIVEWAY

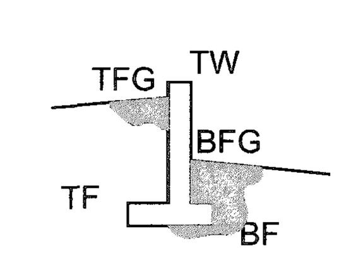
ALL DRIVEWAYS SHALL BE PAVED TO THE LIMITS OF CONSTRUCTION. EXISTING DRIVEWAYS SHALL NOT BE USED FOR PROJECT ACCESS.

13. WHERE WET SUBGRADE IS ENCOUNTERED AND WATER IDENTIFIED BY THE ENGINEER, AN UNDERDRAIN PIPE WITH DRAINAGE AGGREGATE SHALL BE PLACED AS DIRECTED BY THE ENGINEER TO AID IN DEWATERING THE SUBGRADE.
14. THE CONTRACTOR SHALL OBSERVE ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS REGARDING PIPE INSTALLATION IN TRENCHES. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COST INCURRED TO COMPLY WITH THIS REQUIREMENT.
15. ALL EXISTING STORMWATER PIPE SHALL BE REMOVED UNLESS OTHERWISE NOTED ON PLANS OR AS DIRECTED BY THE ENGINEER. ALL COST FOR REMOVAL SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR GRADING COMPLETE.
16. IN AREAS WHERE TYPE 2 CURB IS USED, DRAINAGE STRUCTURES 1033D AND 1034D WILL BE REQUIRED. IN AREAS WHERE TYPE 7 CURB IS USED, DRAINAGE STRUCTURES 1033G AD 1034G WILL BE REQUIRED.
17. AT LOCATIONS WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO EXISTING PAVEMENT WITHOUT AN OVERLAY OR WHERE CURBING IS TO BE PLACED ACROSS A PAVED AREA, A JOINT SHALL BE SAWED ON A LINE ESTABLISHED BY THE ENGINEER TO ENSURE PAVEMENT REMOVAL TO A NEAT LINE. THE COST FOR ASPHALT SAWED JOINTS, WHEN REQUIRED, SHALL BE INCLUDED IN THE BID PRICE FOR GRADING COMPLETE.
18. WHERE EXISTING PAVEMENT MARKINGS AND LINES ARE IN CONFLICT WITH THE TRAFFIC PATTERN BEING USED ON CONSTRUCTION, THE THE CONTRACTOR SHALL REMOVE OR OVERLAY LINES TO THE SATISFACTION OF THE ENGINEER SUCH THAT THE LINES DO NOT CONFUSE THE TRAVELING PUBLIC. ALL REMAINING LINES OR MARKINGS SHALL BE IN ACCORDANCE WITH THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES', OR AS DIRECTED BY THE ENGINEER. TRAFFIC SHALL NOT BE ALLOWED ON ANY PAVEMENT NOT PROPERTY STRIPED.
19. THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLES 104.05 AND 107.07 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND SEQUENCE OF OPERATIONS IN REGARDS TO MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
20. THE BID PRICE FOR TRAFFIC CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO CONSTRUCTION, MAINTENANCE , AND REMOVAL OF TEMPORARY SIGNAGE AND PAVEMENT MARKINGS, BARRICADES, CHANNELIZING DEVICES, ETC, REQUIRED FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION. ALL TEMPORARY SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WIT THE 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES', CURRENT EDITION AND/OR AS DIRECTED BY THE ENGINEER.
21. ALL CUT AND FILL SLOPES SHALL BE GRASSED AS DIRECTED BY THE ENGINEER IMMEDIATELY AFTER THE SLOPES ARE ESTABLISHED IN ORDER TO REDUCE EROSION. IF THE SEASON DOES NOT PERMIT GRASSING, TEMPORARY MULCH SHALL BE USED AS DIRECTED BY THE ENGINEER.
22. THE CONTRACTOR SHALL ENSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT NOT LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED, REMOVED OR REGRADED AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS ON THE PLANS. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
23. QUANTITIES SHOWN ON THE PLANS ARE FOR ESTIMATION PURPOSES ONLY. CONTRACTOR IS TO VERIFY ALL QUANTITIES TO BE INCLUDED IN THE BID PRICE.
24. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBANCE ACTIVITIES AND SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IF DEEMED NECESSARY BY THE ON-SITE INSPECTOR OR AS DIRECTED BY THE ENGINEER.
25. ALL SILT FENCES MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT FENCE INSTALLATION IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL SILT FENCES AND TO REPAIR OR REPLACE ANY SILT FENCE THAT IS NOT SATISFACTORY. EROSION CONTROL MEASURES SHALL BE PLACED IMMEDIATELY AFTER DRAINAGE STRUCTURES ARE IN PLACE. ALL EROSION CONTROL DEVICES SHALL BE PLACED ACCORDING TO THE PLANS AND AS DIRECTED BY THE ENGINEER. SEE THE GEORGIA STANDARD SPECIFICATIONS AND THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA', CURRENT EDITION REGARDING EROSION CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP WETLAND AREAS FREE FROM SILTATION. THE CONTRACTOR SHALL OBTAIN AND ABIDE BY ALL UNITED STATES ARMY CORPS OF ENGINEERS (USACE) RULES AND REGULATIONS CONCERNING CONSTRUCTION ADJACENT TO WATERS OF THE UNITED STATES (WOTUS) AND MAINTAIN WATER QUALITY.
26. THIS PROJECT HAS A TOTAL DISTURBED AREA OF 0.08 ACRES. THE DISTURBED AREA ENCOMPASSES THE THE AREA ASSOCIATED WITH CLEARING, GRADING, EXCAVATING, FILLING OF LAND, OR OTHER SIMILAR ACTIVITIES WHICH MAY RESULT IN SOIL EROSION, AS DEFINED UNDER 'CONSTRUCTION ACTIVITIES' IN THE STATE OF GEORGIA NATURAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NO. GAR100002.
27. AGGREGATE SURFACE COURSE FOR TEMPORARY, DRIVEWAYS, INCLUDING MATERIAL, HAUL AND PLACEMENT SHALL BE USED AT THE ENGINEER'S DIRECTION TO FACILITATE THE MOVEMENT OF LOCAL TRAFFIC THROUGH THE CONSTRUCTION AREA DURING INCLEMENT WEATHER. WHEN USED FOR THIS PURPOSE, SECTION 318 OF THE GDOT STANDARD SPECIFICATIONS IS MODIFIED TO PERMIT TRUCK DUMPING ON UNPREPARED WET, MUDDY SUBGRADE. SECTION 318 IS FURTHER MODIFIED TO PERT THE USE OF CRUSHER STONE AS DESCRIBED IN SECTION 318.02.
28. THE CONTRACTOR WILL HAVE THE USE OF THE FOLLOWING MATERIALS:
    A. GRADED AGGREGATE, ARTICLE 815.2.01
    B. COURSE GRADED AGGREGATE, SIZE 467, ARTICLE 800.2.01
    C. STABILIZED AGGREGATE, TYPE I OR II, SECTION 803.2 OR 803.2.02
    D. CRUSHED STONE, ARTICLE 806.2.01
29. CONSTRUCTION LAYOUT AND STAGING PLAN WILL BE REQUIRED BY THE CONTRACTOR. ALL COST FOR THIS ITEM WILL BE INCLUDED IN THE BID PRICE.
30. CITY OF SANDY SPRINGS PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED A MINIMUM OF 72 HOURS IN ADVANCE OF ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL COORDINATE THIS ACTION WITH THE LEAD INSPECTOR.
31. THE GDOT STANDARDS AND CONSTRUCTION DETAILS REQUIRED FOR THIS PROJECT ARE LISTED IN THIS PLAN SET WITH THE LAST KNOWN REVISION DATE, HOWEVER THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING ON THE PROJECT SITE THE CURRENT GDOT STANDARD DRAWINGS AND CONSTRUCTION DETAILS REQUIRED FOR THIS PROJECT.
32. ANY ADJUSTMENTS OR RELOCATIONS OF CITY OF SANDY SPRINGS PUBLIC WORKS DEPARTMENT FACILITIES SHALL BE IN ACCORDANCE WITH THE CITY OF SANDY SPRINGS ORDINANCE NUMBER 2008-09-48. THIS DOCUMENT IS AVAILABLE AT THE DEPARTMENT OFFICE AT 1 GALAMBOS WAY, SANDY SPRINGS, GA 30328. TELEPHONE (770) 730-5600 AND THE 24 HR EMERGENCY CONTACT NUMBER FOR THE CITY OF SANDY SPRINGS IS (770) 730-5600.
33. THE SURVEY FOR THIS PROJECT WAS PREPARED BY PLANNERS & ENGINEERS COLLABORATIVE AND SUPPLEMENTED USING FULTON COUNTY AND CITY OF SANDY SPRINGS GIS DATA.
34. STORM DRAINAGE FOR THE ROADWAY MUST BE MAINTAINED DURING CONSTRUCTION.
35. UNLESS OTHERWISE SPECIFIED, ANY IRRIGATION SYSTEM ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION IS TO BE RE-ESTABLISHED (INCLUDING TESTING) BY THE CONTRACTOR. PROJECT CONTRACTOR IS TO CUT AND CAP IRRIGATION SYSTEM OUTSIDE OF LIMITS OF CONSTRUCTION DURING CONSTRUCTION.
36. PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY DEBRIS REMAINING AFTER THE REMOVAL OF OF THE EXISTING STORM SEWER PIPES/STRUCTURES AND OTHER DELETERIOUS NON-SOIL MATERIALS SHOULD BE STRIPPED FROM PROPOSED CONSTRICTION AREAS.
37. EXCAVATION BRACING (SHORING) DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ANY SHORING (INCLUDING TRENCH BOXES) GREATER THAN FOUR (4) FEET MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF GEORGIA.
38. FILL MATERIAL SHOULD BE LOW PLASTICITY SOIL (PLASTICITY INDEX LESS THAN 30), FREE OF NON-SOIL MATERIALS AND ROCK FRAGMENTS LARGER THAN 2 INCHES IN ANY ONE DIMENSION.
39. SOIL MOISTURE CONTENT SHOULD BE MAINTAINED WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT.
40. ORGANIC AND/OR DEBRIS LADEN MATERIAL (>3% ORGANICS BY WEIGHT) IS NOT SUITABLE FOR RE-USE AS STRUCTURAL FILL.
41. FILL SHOULD BE PLACED IN THIN, HORIZONTAL LOOSE LIFTS (MAXIMUM 8-INCH) AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). THE UPPER 8 INCHES OF SOIL BENEATH PAVEMENTS SHOULD BE COMPACTED TO AT LEAST 98% STANDARD PROCTOR.
42. CONTRACTOR SHALL PROVIDE INDEPENDENT GEOTECHNICAL TESTING TO VERIFY SOIL COMPACTION MEETS THE CITY OF SANDY SPRINGS STANDARDS.
43. FILL MATERIALS USED IN STRUCTURAL AREAS SHOULD HAVE A TARGET MAXIMUM DRY DENSITY OF AT LEAST 95 POUNDS PER CUBIC FOOT (PCF).
44. OPEN-GRADED CRUSHED STONE SHOULD BE PLACED IN RELATIVELY THIN LIFTS OF 12 INCHES OR LESS AND COMPACTED WITH VIBRATORY COMPACTION EQUIPMENT.
45. WATER LEVELS SHALL BE MAINTAINED AT LEAST ONE FOOT BELOW WORKING SUBGRADE SURFACES TO AVOID DEGRADING SUBGRADE.
46. THE SUBGRADE SHOULD BE WELL-DRAINED TO PREVENT THE ACCUMULATION OF WATER.
47. GRADING COMPLETE - LUMP SUM SHALL INCLUDE ALL UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, CHANNEL EXCAVATION, FOUNDATION BACKFILL MATERIAL, TYPE I, ROCK EXCAVATION, ASPHALT CUTS, CLEARING AND GRUBBING, TREE REMOVAL, DEBRIS/SOLD WASTE REMOVAL, AND REMOVAL OF ALL ITEMS NOT SHOWN AS SEPARATE PAY ITEM. THIS SHALL ALSO INCLUDE ALL COMPACTION EFFORTS NECESSARY TO ACHIEVE THE COMPACTION REQUIREMENT SPECIFIED IN THE PLANS.
48. SITE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS INDICATING ALL CHANGES AND DEVIATIONS FROM CONTRACT DRAWINGS THAT ARE SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR (R.L.S.).

DRAWING LEGEND

SYMBOL	DESCRIPTION
FFE XX.XX	FINISHED FLOOR ELEVATION
BFE XX.XX	BASEMENT FLOOR ELEVATION
10.72	SPOT ELEVATION
10 / 8	EXISTING CONTOURS
10 / 8	PROPOSED CONTOURS
W	PROPOSED WATER LINE
	PROPOSED WATER METER
	PROPOSED VALVE & END CAP
	PROPOSED FIRE HYDRANT & FDC
	PROPOSED TEE, BEND & INTERSECTION
	PROPOSED SANITARY SEWER LINE
	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY CLEANOUT
	PROPOSED GREASE TRAP
	PROPOSED STORM LINE
	PROPOSED JUNCTION BOX
	PROPOSED DROP INLET
	PROPOSED YARD INLET
	PROPOSED CURB INLET
	PROPOSED WEIR INLET
	PROPOSED CATCH BASIN
	PROPOSED HEADWALL
	PROPOSED OUTLET CONTROL STRUCTURE

TYPICAL WALL LABELS



TW = TOP OF WALL
TFG = TOP FINISHED GRADE
BFG = BOTTOM FINISHED GRADE
TF = TOP OF FOOTING
BF = BOTTOM OF FOOTING

GDOT DETAILS USED IN PROJECT

GDOT DETAIL NUMBER	GDOT DETAIL TITLE
9032B	CONCRETE CURB & GUTTER
1030D	CONCRETE & METAL PIPE CULVERTS
1034E	STANDARD PRECAST CATCH BASINS
1011A	PRECAST REINFORCED MANHOLE
1125	TAPERED OUTLET HEADWALL (MODIFIED, CAST-IN-PLACE)

Sandy Springs, GA
OCT 07 2019
Permitted
Director
Community Development Department

NORTH POWERS FERRY ROAD - PHASE 1

A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
1 GALAMBOS WAY
SANDY SPRINGS, GA 30328
PHONE: (770) 730-5600

CITY OF SANDY SPRINGS
FULTON COUNTY
GEORGIA

LAND LOT 175
3rd DISTRICT

"WE PROVIDE SOLUTIONS"
PLANNERS AND ENGINEERS COLLABORATIVE
SITE PLANNING ▪ LANDSCAPE ARCHITECTURE ▪ CIVIL ENGINEERING ▪ LAND SURVEYING
▪ 350 RESEARCH COURT ▪ PEACHTREE CORNERS, GEORGIA 30092 ▪ (770) 451-2741 ▪ FAX (770) 451-3915 ▪

REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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STANDARD SPECIFICATIONS & NOTES

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHARF
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C0.01
SHEET

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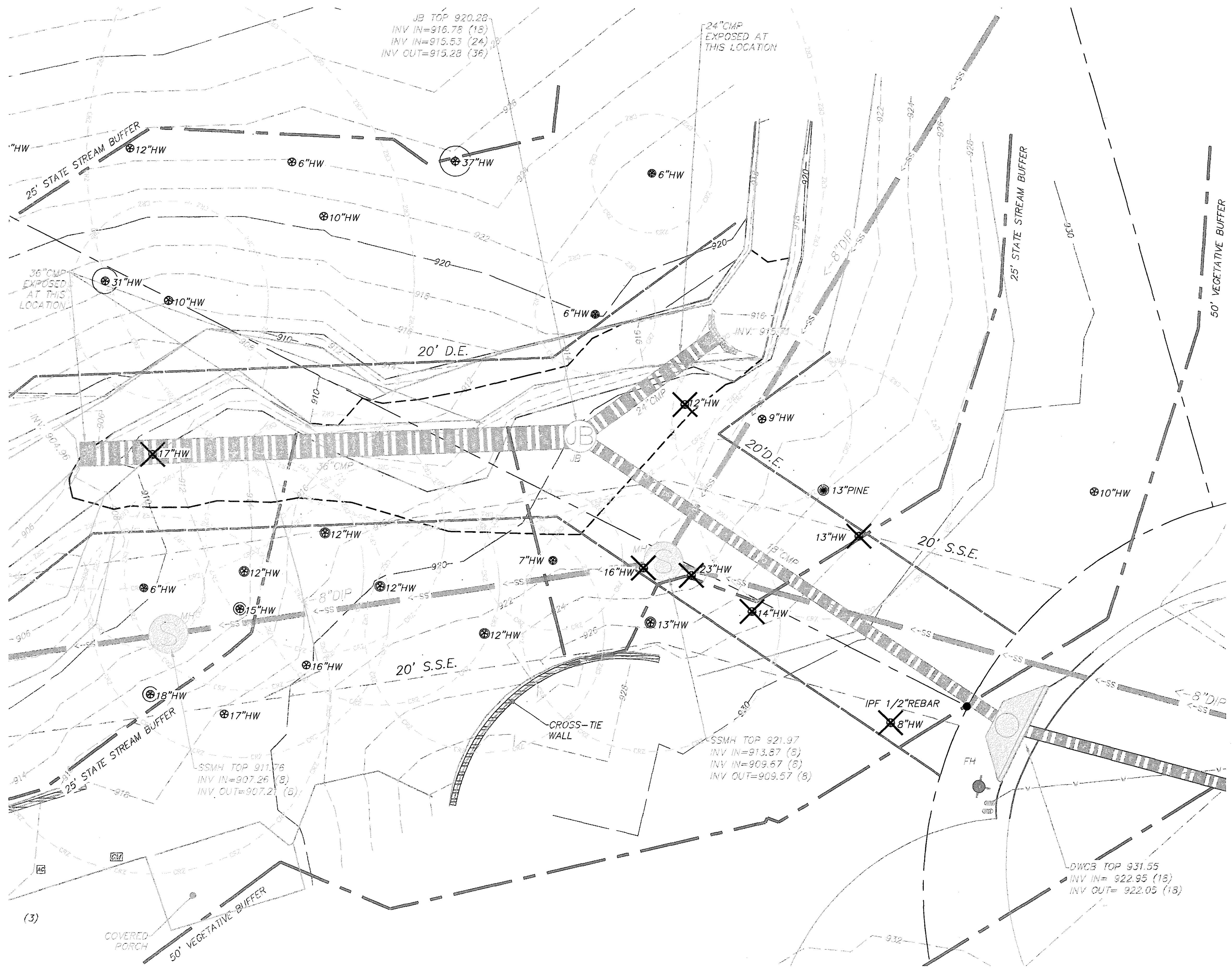

LEGEND

Symbol	Description
IPF	IRON PIN FOUND (#4 Re-Rod unless noted otherwise)
IPS	IRON PIN SET (#4 Re-Rod unless noted otherwise)
OTP	IRON PIN FOUND (open top pipe)
CTP	IRON PIN SET (crimp top pipe)
	POINT
CMF	CONCRETE MONUMENT FOUND
MH	SANITARY SEWER MANHOLE
—S—	SANITARY SEWER LINE
	STORM DRAINAGE LINE
--CS--	COMB. STORM & SAN. SEWER LINE
DWCB	DOUBLE WING CATCH BASIN
CB	CATCH BASIN
JB	JUNCTION BOX
D.I.	DROP INLET
W.I.	WEIR INLET
C.I.	CURB INLET
	POWER POLE
	POWER POLE W/ GUY WIRE
	OVERHEAD POWER / TELEPHONE LINE
WV	WATER VALVE
GV	GAS VALVE
FH	FIRE HYDRANT
—W—	WATER LINE
—G—	UNDERGROUND GAS LINE
—E—	UNDERGROUND ELECTRIC LINE
—T—	UNDERGROUND TELEPHONE LINE
—C—	UNDERGROUND CABLE LINE
	LIGHT POLE
	EXISTING TREE
(S03°10'W)	CALLS PER DEED
TW	TOP OF WALL
BW	BOTTOM OF WALL
	WALL (TYP)
	TRANSFORMER
BH	BOREHOLE
RCP	REINFORCED CONCRETE PIPE
B.S.L.	BUILDING SETBACK LINE
	SIGN
BOC	BACK OF CURB
C/O	CLEANOUT
—x—	FENCE
PIPE	STORM PIPE
HW	HEAD WALL
DBH	DIAMETER AT BREAST HEIGHT
— — —CRZ—	CRITICAL ROOT ZONE
	D.E. (DRAINAGE EASEMENT)
	S.S.E. (SANITARY SEWER EASEMENT)
8"HW	EXISTING TREES TO BE REMOVED

EXISTING TREES TO BE REMOVED:

8" HARDWOOD
12" HARDWOOD
13" HARDWOOD
14" HARDWOOD
16" HARDWOOD
17" HARDWOOD
23" HARDWOOD

24-HOUR CONTACT:
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770-730-5600

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OCT 07 2019
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A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
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REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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EXISTING CONDITIONS

0 5 10 20 30

SCALE: 1" = 10'
DATE: 11/12/2018
PROJECT: 16230.00

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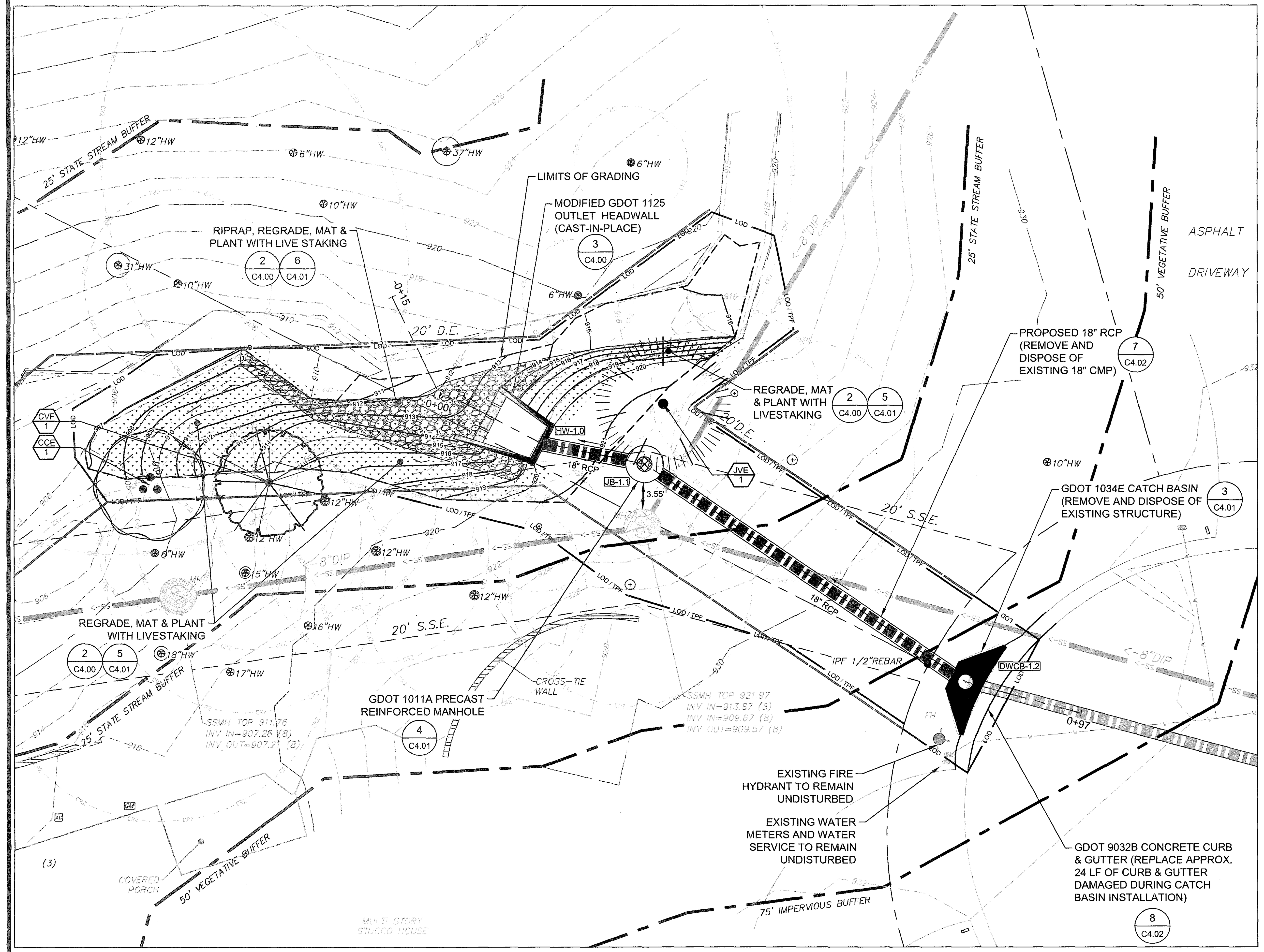
GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHAAP
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

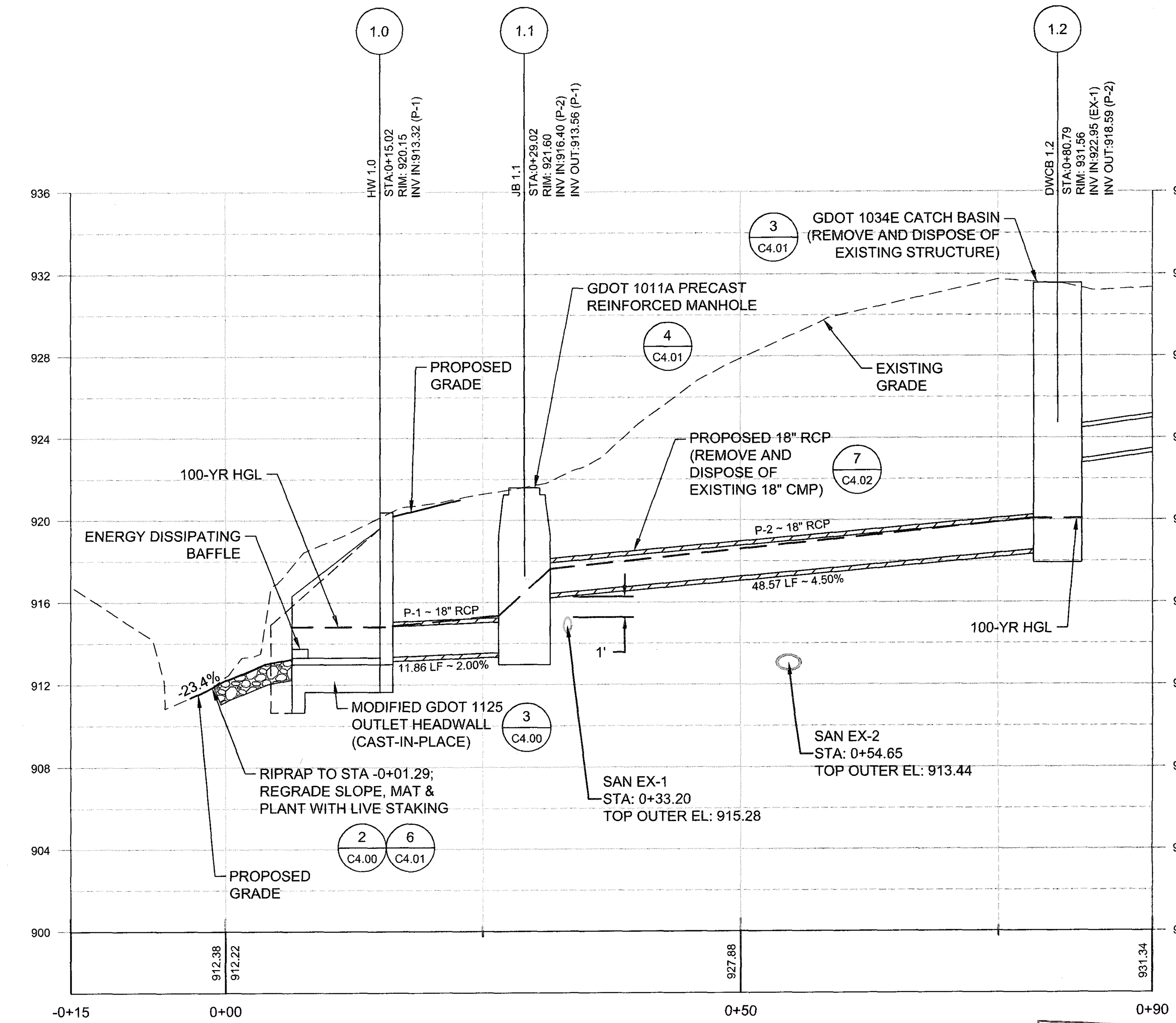
GRID NORTH
GEORGIA WEST ZONE

C1.00
SHEET



GRADING & UTILITY PLAN

SCALE: 1" = 10'



STORM ALIGNMENT

HORIZONTAL SCALE: 1" = 10'

VERTICAL SCALE: 1" = 5'

Sandy Springs, GA
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PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	CAL.	MIN. HT.	SPACING
	CCE	1	Cercis canadensis	Eastern Redbud	B & B	2"Cal	8`-10`	As Shown
	CVF	1	Chionanthus virginicus	White Fringetree	B & B	2"Cal	8`-10`	As Shown
	JVE	1	Juniperus virginiana	Eastern Red Cedar	B & B	2"Cal	8`-10`	As Shown

GA Piedmont Riparian Mix

ERNMX # ERNMX-508
Mix Type: Riparian Sites
Georgia Planting Season: Nov. 1st- March 30th
Seeding Rate: 20 lb per acre (increase rate by 50% if planting outside the recommended season)
Species List
- 39.5% Panicum anceps, GA Ecotype (Beaked Panicgrass, GA Ecotype)
- 20.0% Elymus virginicus, AR Ecotype (Virginia Wildrye, AR Ecotype)
- 14.0% Panicum rigidulum, Coastal Plain NC Ecotype (Redtop Panicgrass, Coastal Plain NC Ecotype)
- 10.0% Chasmanthium latifolium, WV Ecotype (River Oats, WV Ecotype)
- 8.0% Panicum virgatum, 'Carthage', NC Ecotype (Switchgrass, 'Carthage', NC Ecotype)
- 4.0% Chamaecrista fasciculata, FL Ecotype (Partridge Pea, FL Ecotype)
- 3.0% Juncus effusus (Soft Rush)
- 1.0% Hibiscus moscheutos, Coastal Plain NC Ecotype (Crimsoneyed Rosemallow, Coastal Plain NC Ecotype)
- 0.5% Vernonia noveboracensis, PA Ecotype (New York Ironweed, PA Ecotype)

Total: 100%

LIVE STAKES AND SEEDING

TOTAL LIVE STAKING AREA: 825 SF
DESIGNATED AS THE AREA FROM THE TOE OF SLOPE TO THE TOP OF STREAMBANK. AREAS OF SUBJECT TO FREQUENT INUNDATION AND SHEAR FORCES DUE TO STREAM FLOW DURING RAINFALL EVENTS.

LIVE STAKES

CONTRACTOR SHALL SELECT AT LEAST TWO LIVE STAKE SPECIES FROM LIST BELOW AND PLACE AT ALTERNATING INTERVAL. STAKES SHALL BE PLANTED BETWEEN LATE WINTER AND EARLY SPRING.

- SILKY DOGWOOD *CORNUS AMOMUM*
- BLACK WILLOW *SILAX NIGRA*
- COMMON BUTTON BUSH *CEPHALANTHUS OCCIDENTALIS*

PLANTING LENGTH: 2'

SPACING: 4' O.C. (1 STAKE / 4 SF) - ALL STAKES; CONTRACTOR SHALL ALTERNATE STAKE SPECIES AT EQUAL INTERVAL

QUANTITY: 92

SEEDING

ERNST RIPARIAN BUFFER SEED MIX (ERNMX - 508)

PLANTING RATE: 20 LBS / ACRE

GRADING NOTES:

1. DISTURBED AREAS LEFT IDLE FOR FOURTEEN DAYS, AND NOT TO FINAL GRADE, SHALL BE ESTABLISHED TO TEMPORARY VEGETATION (Ds2). DISTURBED AREAS LEFT IDLE FOUR WEEKS OR MORE WILL BE ESTABLISHED TO PERMANENT VEGETATION (Ds3). ALL AREAS TO FINAL GRADE SHALL BE ESTABLISHED TO PERMANENT VEGETATION WITHIN TWO WEEKS.
2. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHALL BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING.
3. DURING UNSUITABLE GROWING SEASONS, MULCH SHALL BE USED AS A TEMPORARY COVER (Ds1). ON SLOPES THAT ARE 4:1 OR STEEPER, MULCH SHALL BE ANCHORED.
4. CITY OF SANDY SPRINGS LAND DISTURBANCE PERMIT MUST BE DISPLAYED ON THE SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A COUNTY ROAD OR STREET.
5. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE SHALL BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ON HALF THE CAPACITY OF THE DEVICE.
6. ALL WORK AND MATERIALS SHALL COMPLY WITH THE CITY OF SANDY SPRINGS GEORGIA REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
7. SITE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS INDICATING ALL CHANGES ADD DEVIATIONS SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR (R.L.S.).
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATION INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS AND POLES, ETC., GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
9. OPEN BURNING OR BURY PITS ARE NOT ALLOWED.

TRAFFIC CONTROL NOTES:

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD REQUIREMENTS.
2. IF A ROAD CLOSURE IS NECESSARY, CONTRACTOR SHALL PROVIDE A DETOUR PLAN.
3. DURING CONSTRUCTION, ONE LANE OF ROAD SHALL REMAIN OPEN AT ALL TIMES UNLESS OTHERWISE APPROVED.

10-YR GUTTER SPREAD

LineNo.	LineID	DrainageArea (ac)	InletTime (min)	iInlet (in/hr)	Runoff Coeff (C)	IncrQ (cfs)	QCarryover (cfs)	QCaptured (cfs)	QBypass (cfs)	Curb Length (ft)	Gutter Width (ft)	Cross Slope, Sx (ft/ft)	Local Depr (in)	Inlet Depth (ft)	Gutter Depth (ft)	Gutter Spread (ft)
1	P-1	4.03	5	7.76	0.51	15.95	0	15.95	0	13	2	0.04	0	0.63	0.64	16.39

100-YR PIPE CHART

LineNo.	LineID	DrainageArea (ac)	FlowRate (cfs)	RunoffCoeff (C)	IncrQ (cfs)	InvertDn (ft)	InvertUp (ft)	LineSlope (%)	LineLength (ft)	LineSize (in)	LineType	n-valuePipe	Grnd/RimElev Dn (ft)	Grnd/RimElev Up (ft)	HGLDn (ft)	HGLUp (ft)	iSys (in/hr)	Tc (min)	VelDn (ft/s)	VelUp (ft/s)	VelAve (ft/s)	QCarryover (cfs)	QCaptured (cfs)	QBypass (cfs)	GutterSpread (ft)	InletDepth (ft)	CapacityFull (cfs)	HGLJnct (ft)	InletID
1	P-1	0	22.17	0	0	913.32	913.56	2.02	11.864	18	Cir	0.013	920.15	921.60	914.82	915.35	10.79	5.1	12.55	12.55	12.55	....	....	....	....	....	14.94	916.33	1.1
2	P-2	4.03	22.25	0.51	22.25	916.4	918.59	4.51	48.567	18	Cir	0.013	921.60	931.56	917.63	920.07	10.82	5	14.38	12.63	13.51	0	22.25	0	27.79	1.06	22.3	920.07	1.2

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LAND LOT 175
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GRADING & UTILITY PLAN & PIPE PROFILE

0 5 10 20 30

SCALE: 1" = 10'
DATE: 11/12/2018
PROJECT: 16230.00

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GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHAAP
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL
CERTIFICATION # 0000067548 EXP. 12/21/2021

GRID NORTH
GEORGIA WEST ZONE

C2.00
SHEET

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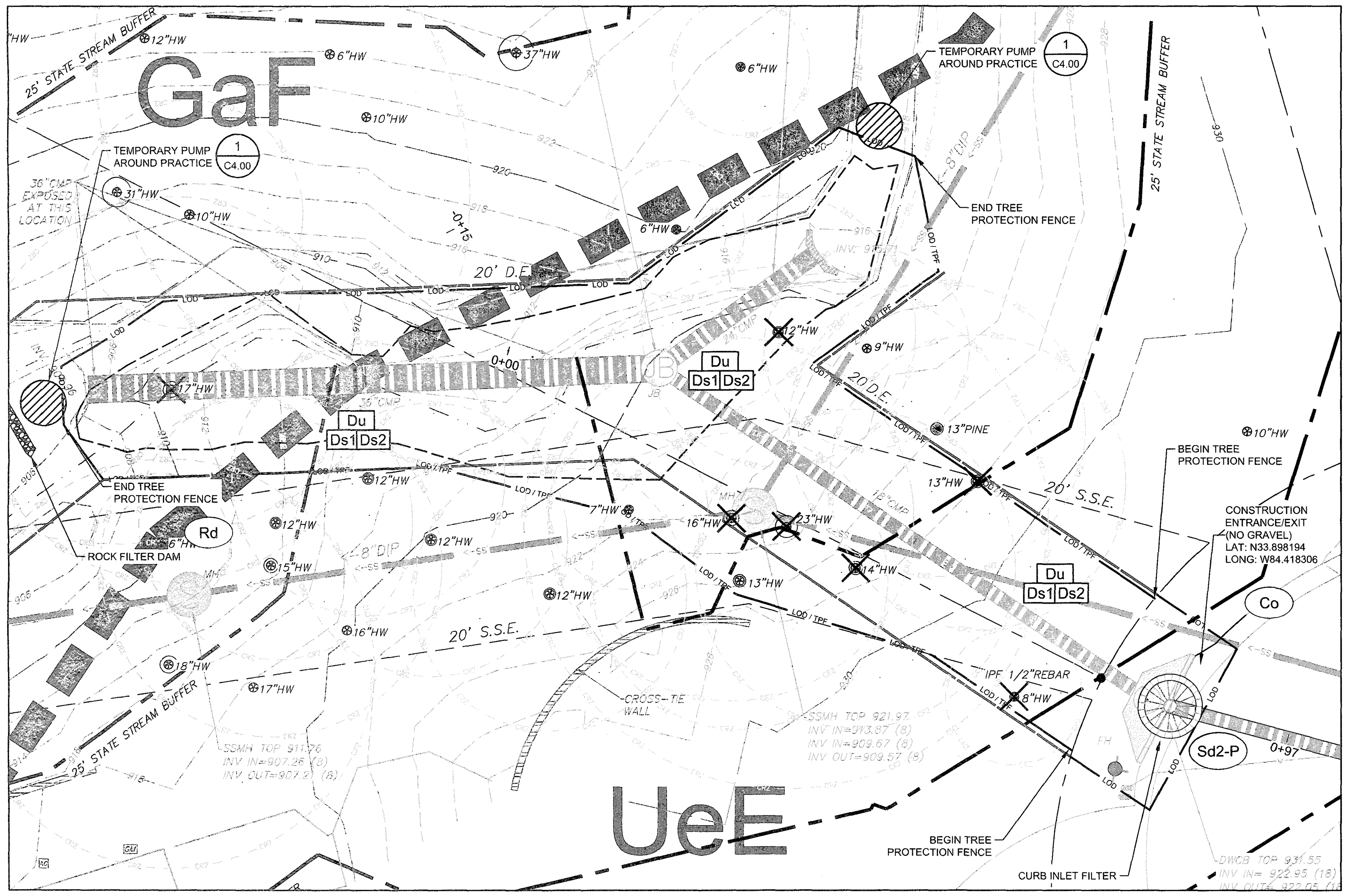
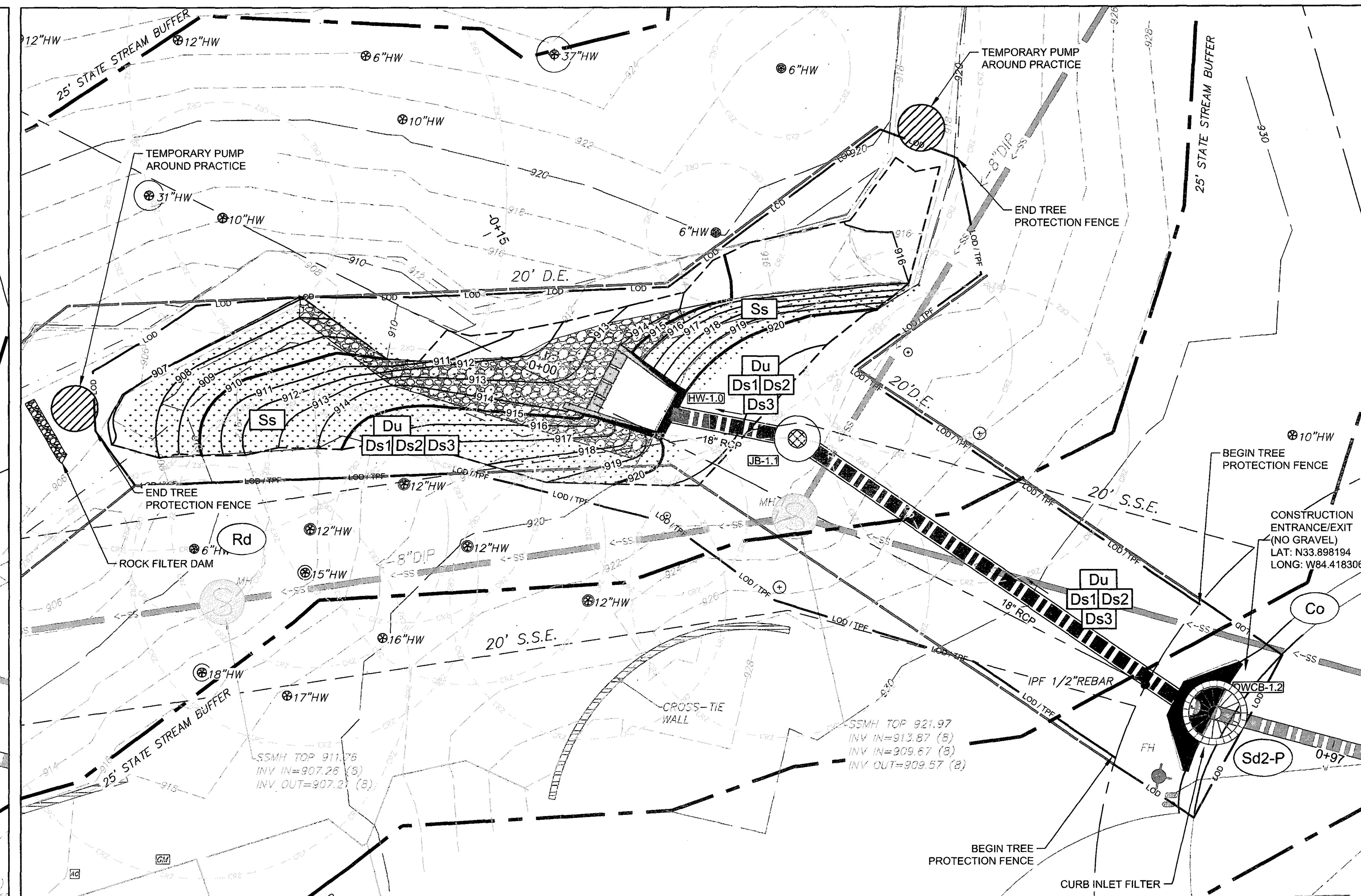


INITIAL EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 10'



INTERMEDIATE EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 10'

Sandy Springs, GA
OCT 07 2019
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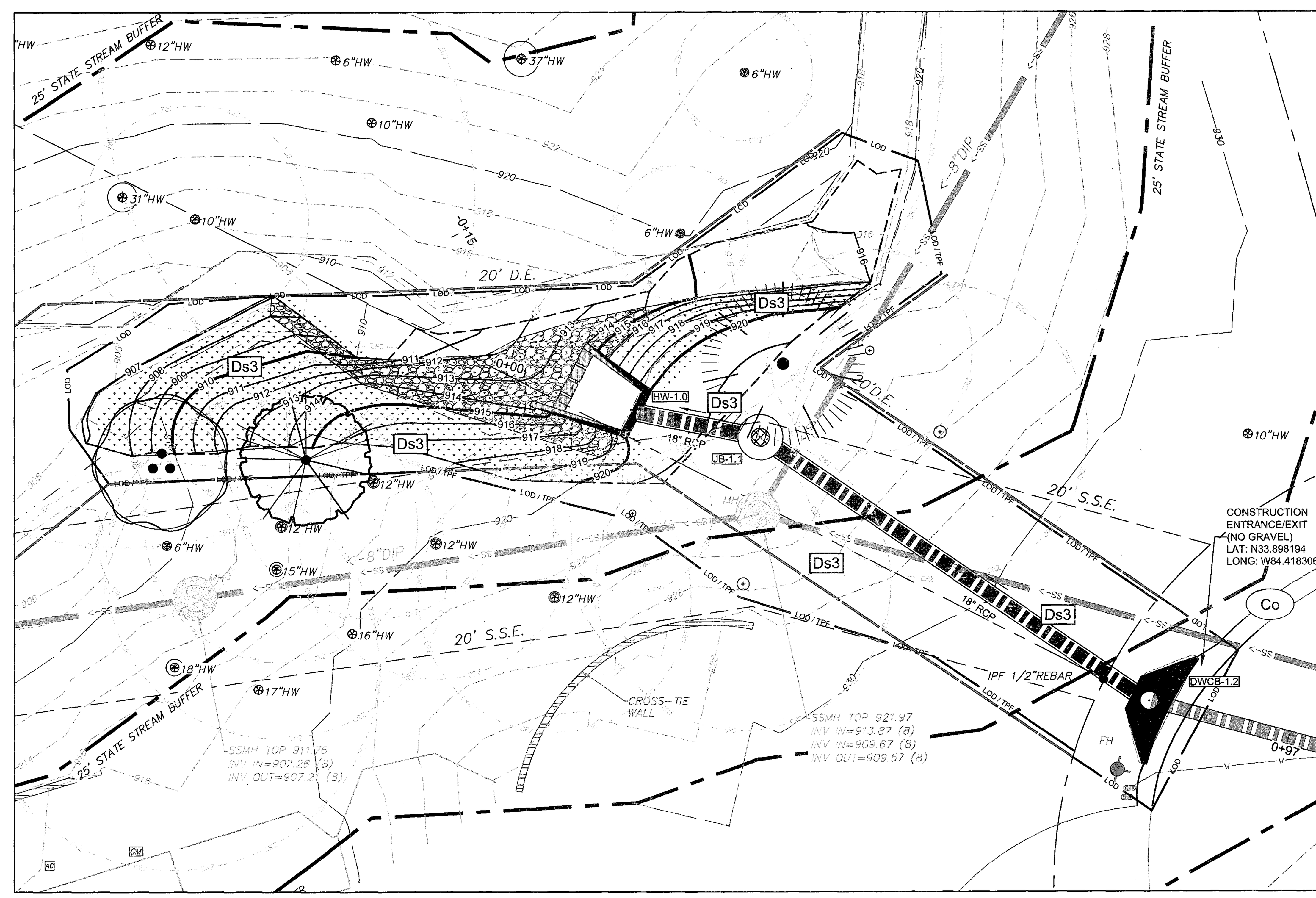
Director
Community Development Department



FINAL EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 10'

EROSION CONTROL NOTES:

1. SEE OUTLET PROTECTION (St) DETAIL ON SHEET C3.02 FOR DESIGN DETAILS.
2. ALL SILT FENCE AND/OR TREE PROTECTION FENCE SHALL BE REMOVED FOLLOWING FINAL STABILIZATION.
3. ANY FILL DIRT PLACED ONSITE MUST BE CERTIFIED AS 'WEED FREE'.
4. Ds2 MULCH TO BE BROOM SEDGE MULCH.
5. Ds3 GRASS TO BE ERNST MIX 508 UNLESS OTHERWISE NOTED. SEE SHEET C2.00 FOR LIVE STAKE SPECIES & SEEDING TYPE.
6. SEE SHEET C2.00 FOR TREE SPECIMEN SCHEDULE.
7. NO EQUIPMENT SHALL BE STAGED OUTSIDE OF ROAD SHOULDER OR IN RIGHT-OF-WAY WITHOUT THE REQUIRED TRAFFIC CONTROL MEASURES IN PLACE.

TRAFFIC CONTROL NOTES:

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD REQUIREMENTS.
2. IF A ROAD CLOSURE IS NECESSARY, CONTRACTOR SHALL PROVIDE A DETOUR PLAN.
3. DURING CONSTRUCTION, ONE LANE OF ROAD SHALL REMAIN OPEN AT ALL TIMES UNLESS OTHERWISE APPROVED.

ES&PC LEGEND

VEGETATIVE BEST MANAGEMENT PRACTICES

Du	DUST CONTROL ON DISTURBED AREA	Ss	SLOPE STABILIZATION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)	X	EXISTING TREES TO BE REMOVED

STRUCTURAL BEST MANAGEMENT PRACTICES

ROCK FILTER DAM	Rd	CURB INLET SEDIMENT FILTER	Sd2-P
LOD / TPF — LIMITS OF DISTURBANCE / TREE PROTECTION FENCE		—x— SILT FENCE	Sd1-S
LOD — LIMITS OF DISTURBANCE			

TOTAL DISTURBED AREA: 0.08 ACRES

SOILS INFORMATION

THE EXISTING SOILS ON SITE CONSIST OF:

GaF - Grover-Mountain Park complex, 20-60% slopes, stony

UeE - Urban land-Ashlar-Rion complex, 10-25% slopes, stony

THERE ARE KNOWN STATE WATERS ON THE PROPERTY
THERE ARE IMPAIRED STREAMS WITHIN ONE MILE DOWNSTREAM AND WITHIN THE SAME WATERSHED AS THE PROJECT SITE
THERE ARE NO WETLANDS ON THE PROJECT SITE

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EROSION & SEDIMENT CONTROL PLANS

0 5 10 20 30

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GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHARF
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

GRID NORTH
GEORGIA WEST ZONE

C3.00
SHEET

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Du — DUST CONTROL ON DISTURBED AREAS

DEFINITION

Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

CONDITIONS

This practice is applicable to areas subject to surface and air movement of dust where on and off-site property damage may occur without treatment.

METHOD AND MATERIALS

A. TEMPORARY METHODS

Mulches. See standard Ds1 - Disturbed Area Stabilization (With Mulching Only). Synthetic resins may be used instead of asphalt to bind mulch material. Refer to standard Tb-Tackifiers and Binders. Resins such as Curasol or Terratack should be used according to manufacturer's recommendations.

Vegetative Cover. See standard Ds2 - Disturbed Area Stabilization (With Temporary Seeding).

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils.) Keep traffic off these areas. Refer to standard Tb-Tackifiers and Binders.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure which should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. PERMANENT METHODS

Permanent Vegetation. See standard Ds3 - Disturbed Area Stabilization (With Permanent Vegetation). Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See standard Tp - Topsoiling.

Stone. Cover surface with crushed stone or coarse gravel. See standard Cr - Construction Road Stabilization.

Ds1 — DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DEFINITION

Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

CONDITIONS

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored, and have a continuous 90% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months. if an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed

SPECIFICATIONS

MULCHING WITHOUT SEEDING
This standard applies to grades or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

SITE PREPARATION
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

MULCHING MATERIALS
Select one of the following materials and apply at the depth indicated:
1. Dry straw or hay shall be applied t a depth of 2 to 4 inches providing complete soil coverage. One advantage of the material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Cutback asphalt (slow curling) shall be applied at 1200 gallons per acre (or ¼ gallon per sq. yd.).
4. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and reused.

APPLYING MULCH
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. Dry Straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Cutback asphalt shall be applied uniformly. Care should be taken in areas of pedestrian traffic due to problems of "tracking in" or damage to shoes, clothing, etc.
4. Apply polyethylene film on exposed areas.

ANCHORING MULCH
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch, but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application. Straw or hay mulch spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE-5 or SS-1). The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifiers and binders can be substituted for emulsified asphalt. Please refer to specification Tb-Tackifiers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Ds2 — DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

DEFINITION

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

CONDITIONS

Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established.

SEEDING RATES FOR TEMPORARY SEEDING

SPECIES	RATE Per 1,000 sq.ft.	RATE Per Acre*	PLANTING DATES**
Rye	3.9 pounds	3 bu.	9/15-11/30
Ryegrass	0.9 pounds	40 lbs.	9/1-12/15
Annual Lespedeza	0.9 pounds	40 lbs.	3/1-3/31
Weeping Lovegrass	0.1 pounds	4 lbs.	4/1-5/31
Sudangrass	1.4 pounds	60 lbs.	5/1-7/31
Browntop Millet	0.9 pounds	40 lbs.	4/15-6/30
Wheat	4.1 pounds	3bu.	10/1-12/15

* Unusual site conditions may require heavier seeding rates.
** Seeding dates may need to be altered to fit temperature variations and conditions.

SPECIFICATIONS

GRADING AND SHAPING

Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

SEEDBED PREPARATION

When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or handseeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

LIME AND FERTILIZER

Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent per acre (12-16 lbs./1,000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, ripper or chisel.

SEEDING

Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand.

MULCHING

Temporary vegetation can, in most places, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to Ds1 - Disturbed Area Stabilization (With Mulching Only).

IRRIGATION

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will ensure germination of the seed. Subsequent applications should be made when needed.

Ds3 — DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

SPECIFICATIONS

GRADING AND SHAPING

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

SEEDBED PREPARATION

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seedbed preparation will be done as follows:

I. Broadcast plantings

1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the anchoring of soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operations of tillage equipment, the soil surface shall be pitter or trenched accross the slopr with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

II. Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September

PLANTING

I. Hydraulic Seeding

Mix the seed (innoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

II. Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

III. No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

IV. Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots. Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface. Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

MULCHING

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall receive 75% soil cover. Select the mulching material from the following and apply as indicated:

1. Dry straw or dry hay of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. Wood cellulose mulch or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. Sericea lespedeza hay containing mature seed shall be applied at a rate of three tons per acre.
5. Pine straw or pine bark shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornaments or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. Bituminous treated roving may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch

Anchor straw or hay mulch immediately after application by one of the following methods:

1. Emulsified asphalt can be (a) sprayed uniformly onto the mulch as it is ejected from the blower machine or (b) sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special blower equipment.
The combination of asphalt emulsion and water shall consist of a homogenous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of grade SS-1h or CSS-1h emulsified asphalt and 100 gallons of water per ton of mulch.
Care shall be taken at all times to protect state waters, the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.
2. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.

3. Synthetic tackifiers or binders approved by GDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. Refer to Tb - Tackifiers and Binder.

4. Rye or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.

5. Plastic mesh or netting with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

IRRIGATION

Irrigation shall be applied at a rate that will not cause runoff.

SEEDING RATES FOR PERMANENT SEEDING

SPECIES	RATE Per 1,000 sq.ft.	RATE Per Acre*	PLANTING DATES**
BAHIA	1.4 pounds	60 lbs.	4/1-5/31
BERMUDA	0.2 pounds	10 lbs.	4/1-5/31
CENTIPEDE	BLOCK SOD ONLY	BLOCK SOD ONLY	11/1-5/31
LESPEDEZA	1.7 pounds	75 lbs.	9/1-2/28
WEEPING LOVE GRASS	0.1 pounds	4 lbs.	3/15-5/31
SWITCH GRASS	0.9 pounds	40 lbs.	3/1-4/30

* Unusual site conditions may require heavier seeding rates
** Seeding dates may need to be altered to fit temperature variations and conditions.

Table 6-5.1. Fertilizer Requirements

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs.acre)	Nitrogen Top Dressing Rate (lbs./acre)
Cool Season Grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100[1,2] - 30
Cool Season Grasses & Legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50[1] - -
Ground Covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300[3] 1300[3] 400	- - -
Pine Seedlings	First	20-10-5	one 21g pellet per seedling placed in closing hole	-
Shrub Lespedeza	First Maintenance	0-10-10 0-10-10	700 700[4]	-
Temporary cover crops seeded alone	First	10-10-10	500	30[5]
Warm Season Grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100[2,6] 50-100[2] 30
Warm Season Grasses & Legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 800 400	50[6]

[1] Apply in spring following seeding.

[2] Apply in split applications when high rates are used.

[3] Apply in 3 split applications.

[4] Apply when plants are pruned.

[5] Apply to grass species only.

[6] Apply when plants grow to a height of 2 to 4 inches.

Sandy Springs, GA
OCT 07 2019
Permitted
Director
Community Development Department

NORTH POWERS FERRY ROAD - PHASE 1
A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
1 GALAMBOS WAY
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CITY OF SANDY SPRINGS
FULTON COUNTY
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REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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EROSION & SEDIMENT CONTROL DETAILS

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHA
08/07/2019

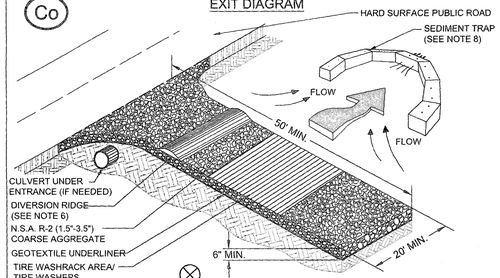
GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C3.01
SHEET

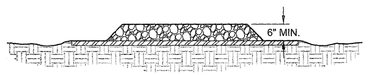
CRUSHED STONE CONSTRUCTION EXIT

Co

EXIT DIAGRAM



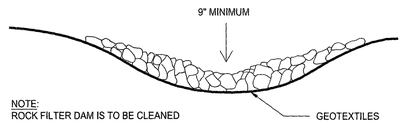
ENTRANCE ELEVATION



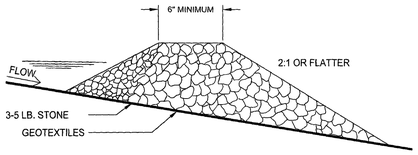
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%..
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

ROCK FILTER DAM

Rd



NOTE:
ROCK FILTER DAM IS TO BE CLEANED OUT WHEN VOLUME BECOMES HALF FULL.



NOTE:
ROCK SIZE DETERMINED ACCORDING TO SPECIFICATIONS SET FORTH IN APPENDIX C.

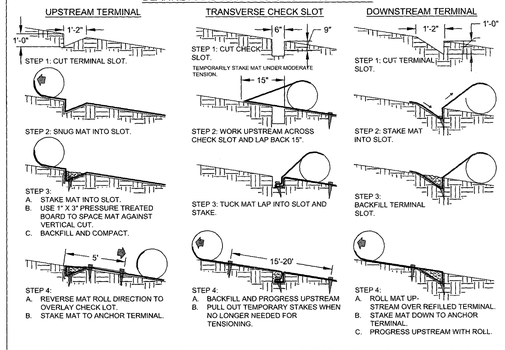
SLOPE STABILIZATION

Ss

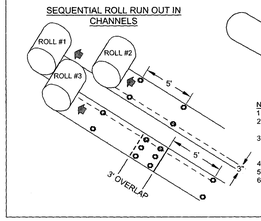
N.T.S.

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

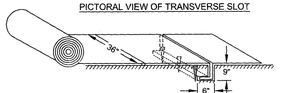
BLANKET AND MATTING CROSS-SECTIONS



SEQUENTIAL ROLL RUN OUT IN CHANNELS



PICTORAL VIEW OF TRANSVERSE SLOT

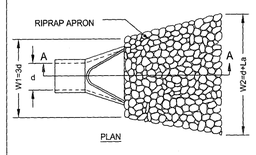


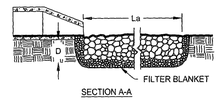
NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

RIPRAP OUTLET PROTECTION

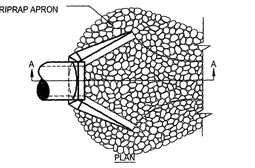
St

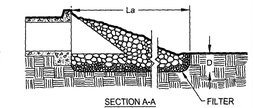
PIPE OUTLET TO FLAT AREA (NO WELL DEFINED CHANNEL)





PIPE OUTLET TO WELL DEFINED CHANNEL





GENERAL NOTES:
1. La IS THE LENGTH OF THE RIPRAP APRON.
2. D IS THE THICKNESS OF THE APRON. $D = 1.5$ TIMES THE MAXIMUM STONE DIAMETER ($d_{max} = 1.5 \times d_{50}$) BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

ADDITIONAL NOTES:
A. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
B. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.
C. W1 AND W2 FOR PIPES OUTFALLING INTO A DEFINED DITCH SHOULD BE SUFFICIENTLY WIDE TO HAVE STONE ONE FOOT ABOVE THE CROWN OF THE PIPE OR THE TOP OF DITCH BANK, WHICH EVER IS LOWER.

Location	d (in)	Max Flow (cfs)	d_{50} (ft)	W1 (ft)	La (ft)	W2 (ft)	V (ft/s)	D (ft)
HW-1.0	18	22.17	0.75	4.5 (NOTE 1)	4-15 (NOTE 1)	10 (NOTE 1)	12.55	1.75
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	

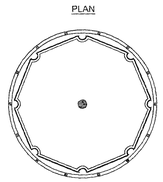
OUTLET PROTECTION (St) NOTE:
1. USE GDOT TYPE III RIPRAP IN ACCORDANCE WITH GDOT SPECIFICATION SECTION 805. APRON LENGTH AND WIDTH VARY TO MATCH EXISTING STREAMBANK TOPOGRAPHY. CONTRACTOR SHALL MATCH LOCATION AND PLACEMENT SHOWN ON SHEET C2.00.

TREE PROTECTION

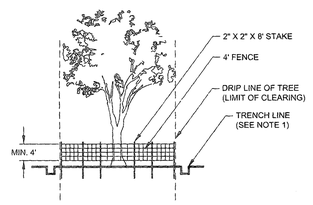
Tr

"SNOW" FENCE

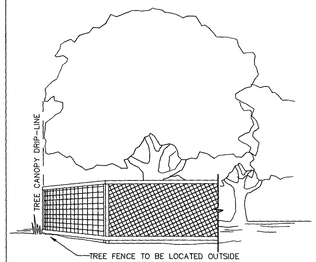
PLAN

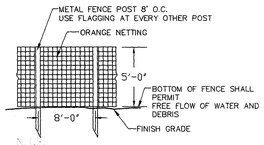


CROSS-SECTION



NOTES:
1. INSTALL FENCES BY HAND (TRENCHER NOT ALLOWED) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT.
2. SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REBAR IS NOT TO BE USED FOR STAKES).
3. MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
4. DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
5. FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4' HIGH MINIMUM.





TREE PROTECTION AREA
KEEP OUT!

TREE PROTECTION SIGN PLACED AT LEAST EVERY 50' ALONG LENGTH OF TREE PROTECTION FENCE. ALSO PROVIDE SIGNS IN SPANISH

TREE PROTECTION FENCE

Sandy Springs, GA
OCT 07 2019
Permitted
Director
Community Development Department

NORTH POWERS FERRY ROAD - PHASE 1

A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
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PHONE: (770) 730-5600

CITY OF SANDY SPRINGS
FULTON COUNTY
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LAND LOT 175
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REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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EROSION & SEDIMENT CONTROL DETAILS

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHARF
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C3.02
SHEET

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measure for dewatering in-channel construction sites

DESCRIPTION

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

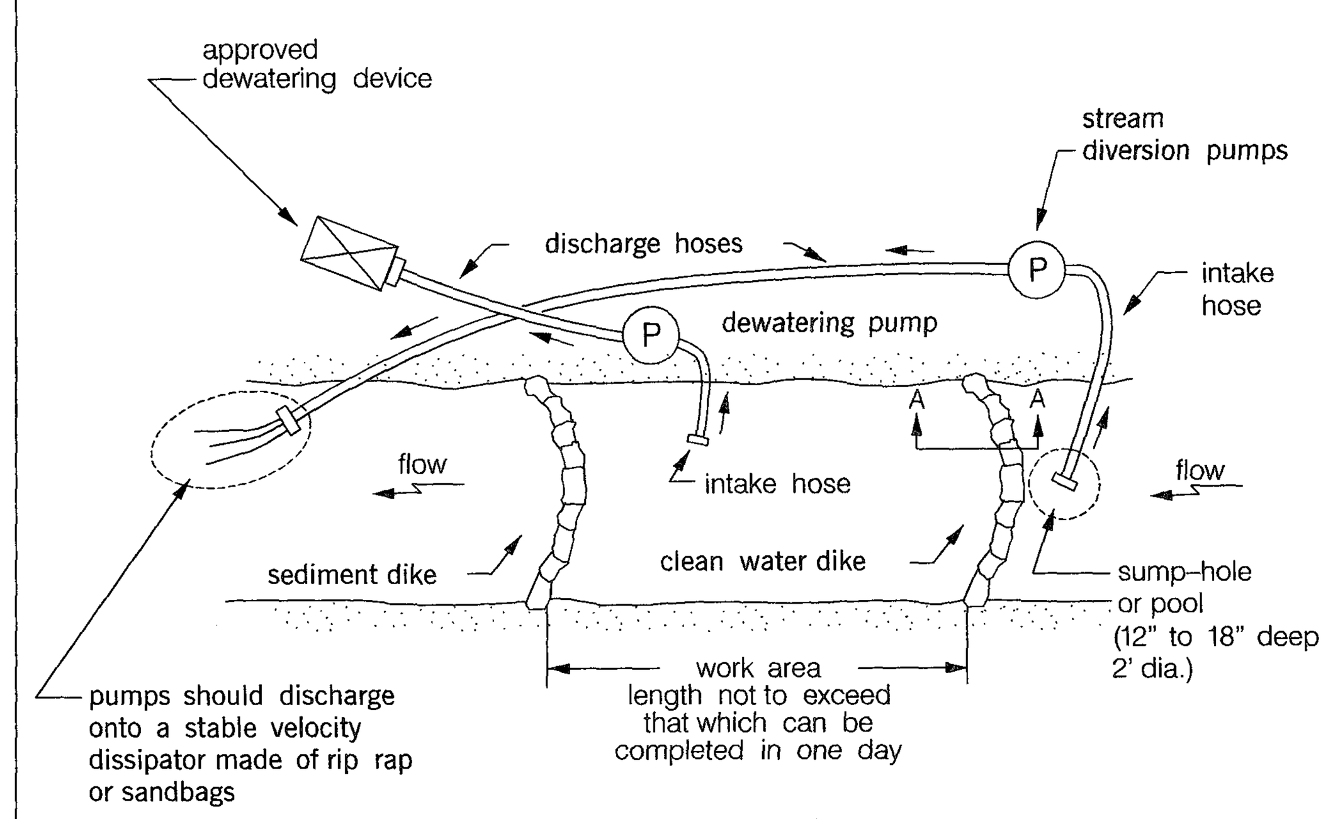
1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.

MGWC 1.2: PUMP-AROUND PRACTICE

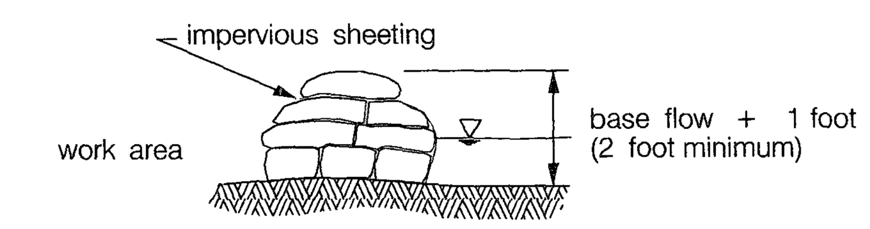
7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (See Section 4, Stream Crossings, Maryland Guidelines to *Waterway Construction).*
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross- sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be regraded and revegetated as per the planting plan.

Maryland's Guidelines To Waterway Construction
DETAIL 1.2: PUMP–AROUND PRACTICE

PLAN VIEW



SECTION A–A



cross section of sandbag dike

TEMPORARY INSTREAM CONSTRUCTION MEASURES	*REVISED NOVEMBER 2000 PAGE 1.2 – 3*	MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

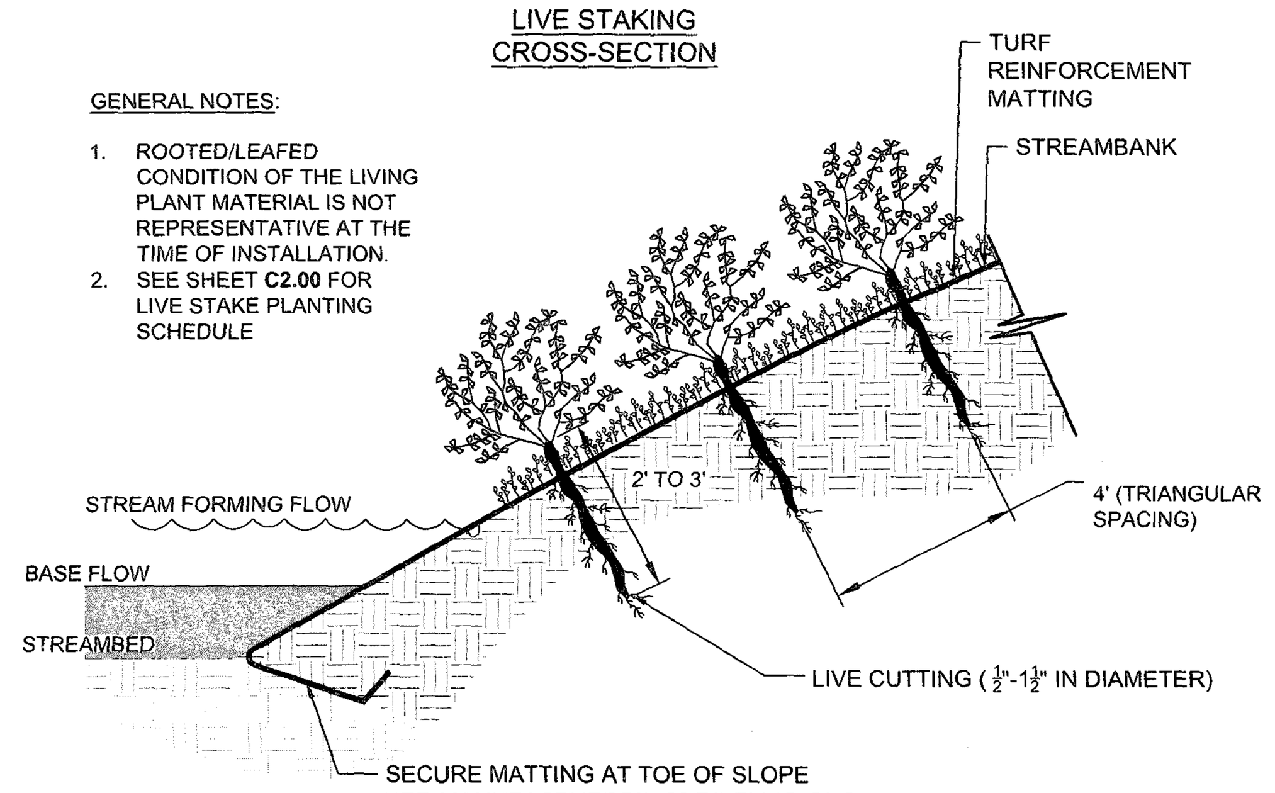
(1 / C3.00) DETAIL
TEMPORARY PUMP-AROUND PRACTICE
SCALE: N.T.S.

Sandy Springs, GA
OCT 07 2019
Permitted
Director
Community Development Department

LIVE STAKING CROSS-SECTION

GENERAL NOTES:

1. ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE AT THE TIME OF INSTALLATION.
2. SEE SHEET **C2.00** FOR LIVE STAKE PLANTING SCHEDULE

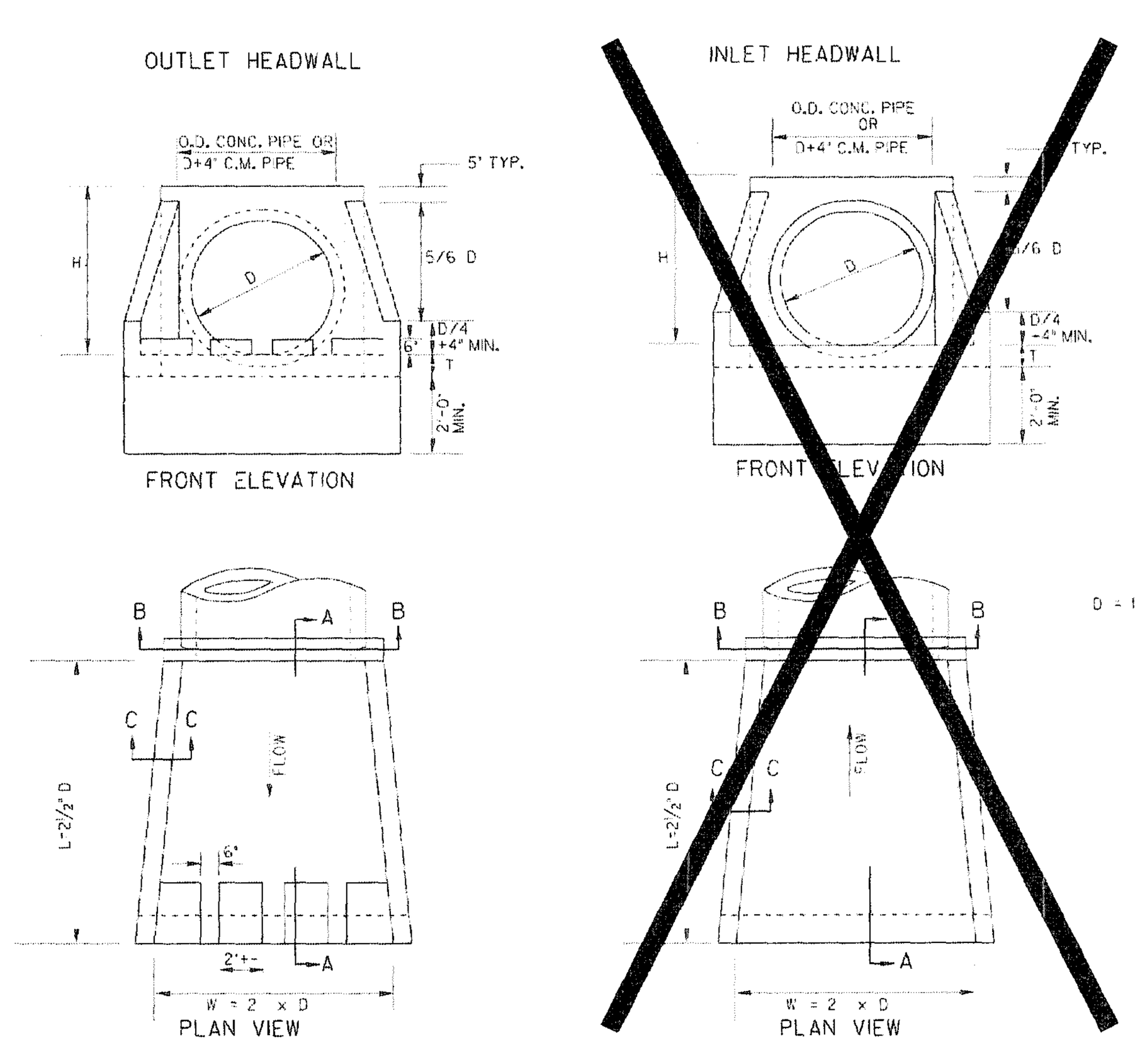


Live material preparation
- The materials must have side branches cleanly removed with the bark intact.
- The basal ends should be cut at an angle or point for easy insertion into the soil. The top should be cut square.
- Materials should be installed the same day that they are prepared.

Installation
- Erosion control fabric should be placed on slopes subject to erosive inundation.
- Tamp the live stake into the ground at right angles to the slope and diverted downstream.
- The installation may be started at any point on the slope face.
- The live stakes should be installed 4 feet apart using triangular spacing. The density of the installation will range from 2 to 4 stakes per square yard. Site variations may require slightly different spacing.
- Placement may vary by species. For example, along many western streams, tree-type willow species are placed on the inside curves of point bars where more inundation occurs, while shrub willow species are planted on outside curves where the inundation period is minimal.
- The buds should be oriented up.
- Four-fifths of the length of the live stake should be installed into the ground, and soil should be firmly packed around it after installation.
- Do not split the stakes during installation. Stakes that split should be removed and replaced.
- An iron bar can be used to make a pilot hole in firm soil.
- Tamp the stake into the ground with a dead blow hammer (hammer head filled with shot or sand).

(2 / C2.00) DETAIL
LIVESTAKING
SCALE: N.T.S.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



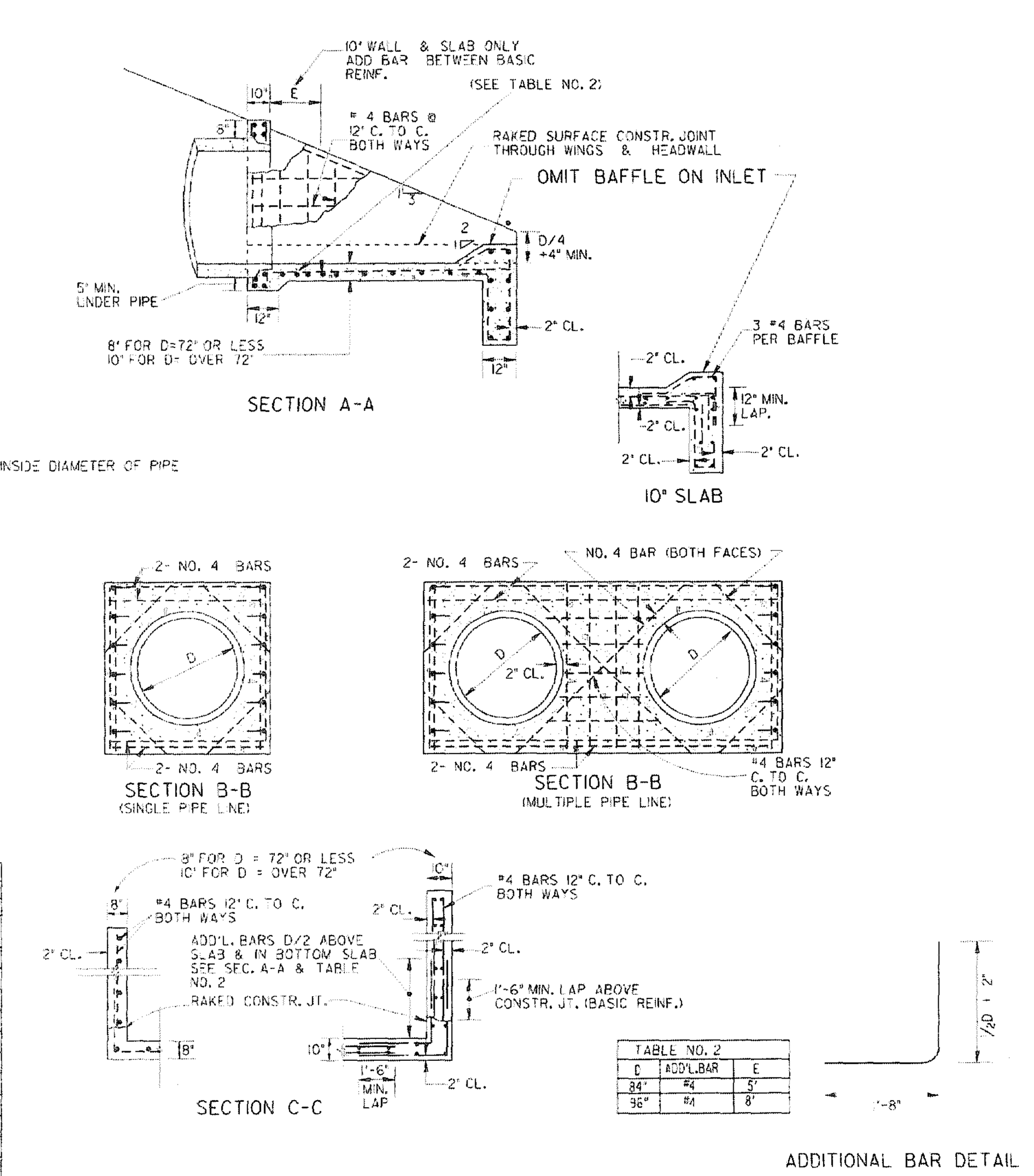


TABLE NO. 1 - QUANTITIES FOR HEADWALLS

	CU. YDS. CONCRETE (PAY QUANTITIES) * FOR SINGLE LINE		ADD FOR ADD'L LINE		LBS. STEEL (GIVEN FOR INFORMATION ONLY) FOR SINGLE LINE		ADD FOR EACH ADD'L LINE	
D	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET
15"	0.87	0.93	0.60	0.66	102	113	73	83
18"	1.10	1.16	0.85	0.93	106	117	93	104
24"	1.61	1.69	1.29	1.37	127	138	124	134
30"	2.21	2.32	1.83	1.96	170	180	154	164
36"	2.92	3.05	2.49	2.63	238	254	196	212
42"	3.73	3.87	3.00	3.17	290	306	231	247
48"	4.62	4.80	3.58	3.74	335	351	265	281
54"	5.63	5.83	4.17	4.38	407	428	319	340
60"	6.72	6.95	4.82	5.01	456	477	360	391
72"	9.22	9.48	6.24	6.46	623	649	475	494
84"	14.84	15.19	9.05	9.29	1517	1539	1017	1044
96"	18.88	19.27	11.13	11.41	2118	2150	1323	1350

*NOTE: QUANTITIES SHOWN WILL BE ACTUAL PAY QUANTITIES FOR CLASS "A" CONCRETE, INCLUDING REINFORCED STEEL. NO ADJUSTMENT WILL BE MADE FOR AS BUILT QUANTITIES.

D - INSIDE DIAMETER OF PIPE CULVERT

H = D + 10" MIN. FOR C.M. PIPE
H = D + PIPE WALL THICKNESS + 8" FOR CONC. PIPE (13/2 D + 9" TYP.)

T = 8" FOR D = 72" OR LESS
T = 10" FOR D = OVER 72"

TABLE NO. 2

D	ADD'L BAR	E
84"	#4	5'
96"	#4	8'

NOTE: HEADWALL SHOWN ON C2.00 SHALL HAVE ENERGY DISSIPATING BAFFLES ASYMMETRICALLY SLOPED WINGWALLS. WINGWALLS WILL BE UNEQUAL IN LENGTH. CONTRACTOR SHALL MATCH CUSTOM HEADWALL TO GDOT 1125 DESIGN SPECIFICATIONS TO THE MAXIMUM EXTENT PRACTICABLE.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
TAPERED
INLET HEADWALL - OUTLET HEADWALL
(BUILT-IN-PLACE)
NO SCALE — REV. & REDR. OCT., 1999
DES. DRW. TRA. CHK. — (SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR. — (APPROVED) CHIEF ENGINEER — NUMBER 1125

(3 / C2.00) DETAIL
MODIFIED GDOT 1125 OUTLET HEADWALL (CAST-IN-PLACE)
SCALE: N.T.S.

NORTH POWERS FERRY ROAD - PHASE 1
A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
1 GALAMBOS WAY
SANDY SPRINGS, GA 30328
PHONE: (770) 730-5600

LAND LOT 175
3rd DISTRICT

CITY OF SANDY SPRINGS
FULTON COUNTY
GEORGIA

"WE PROVIDE SOLUTIONS"
PLANNERS AND ENGINEERS COLLABORATIVE
SITE PLANNING ▪ LANDSCAPE ARCHITECTURE ▪ CIVIL ENGINEERING ▪ LAND SURVEYING
▪ 350 RESEARCH COURT ▪ PEACHTREE CORNERS, GEORGIA 30092 ▪ (770) 451-2741 ▪ FAX (770) 451-3915 ▪

REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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CONSTRUCTION DETAILS

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

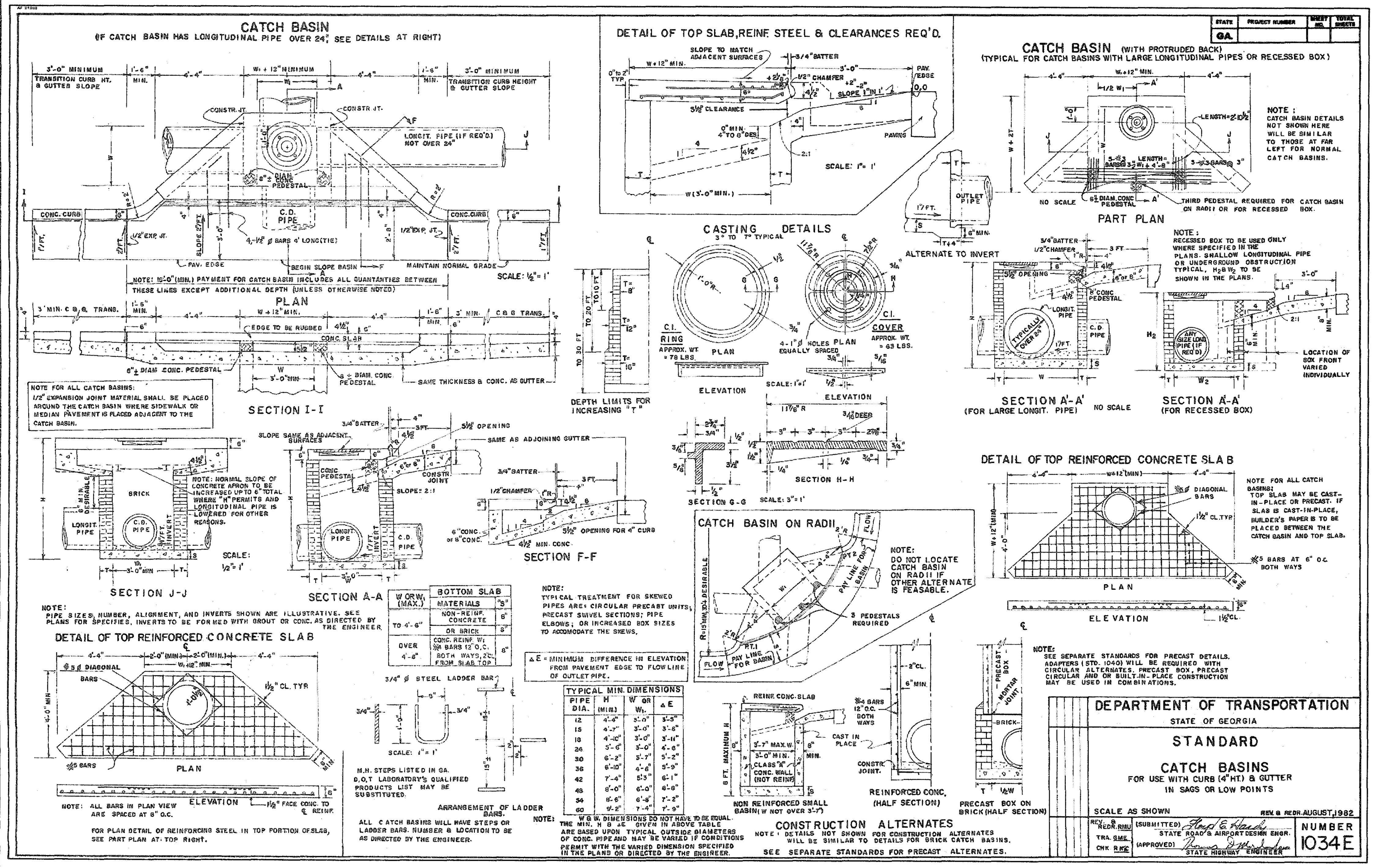
THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHARF
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C4.00
SHEET

J:\16230000\Ds\PHASE 1_Plansheets\C4.00 - CONSTRUCTION DETAILS - 16230000.dwg - GLcm - 9/12/2019 10:15 AM

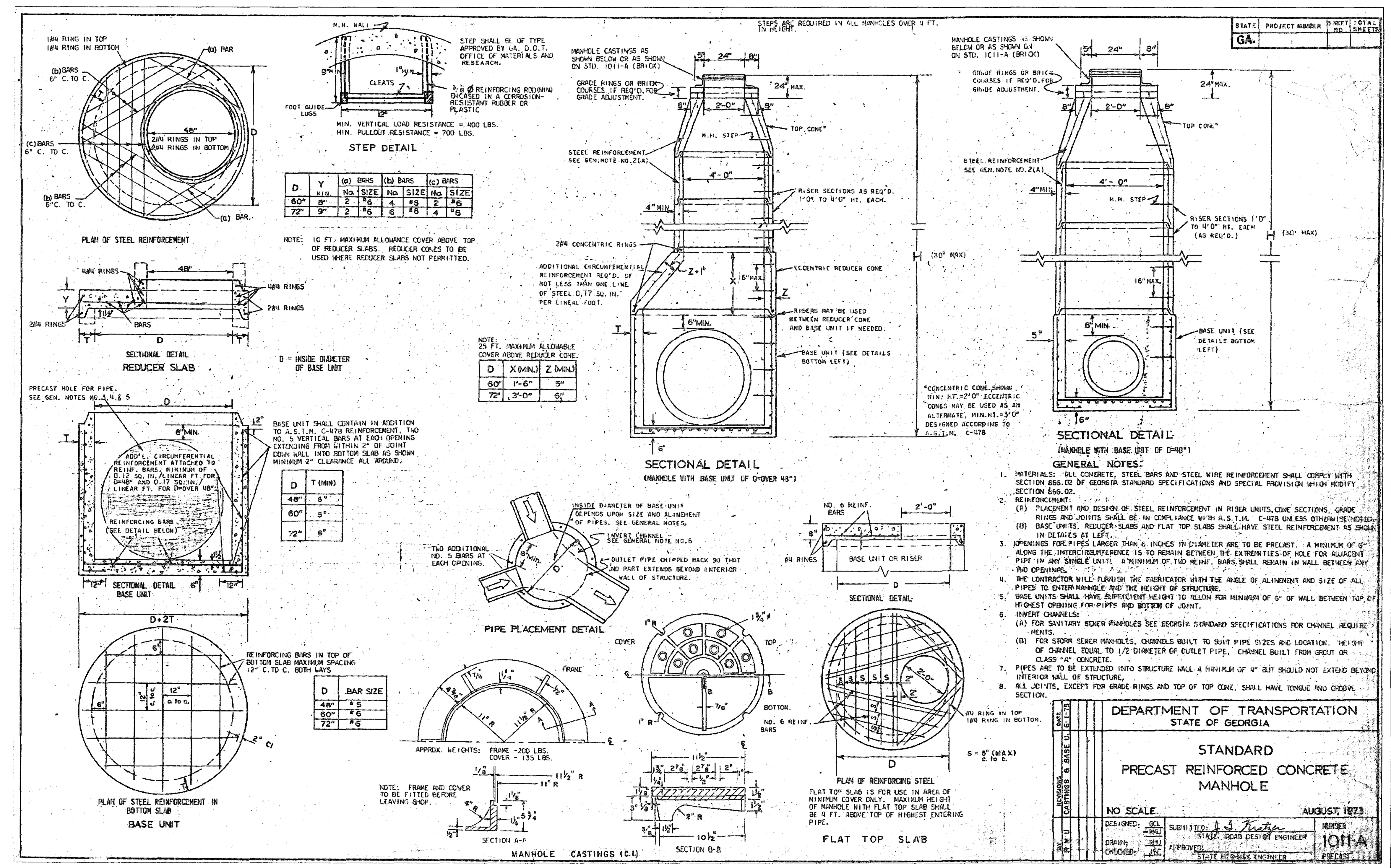


3
C2.00

DETAIL

GDOT 1034E CATCH BASIN

SCALE: N.T.S.

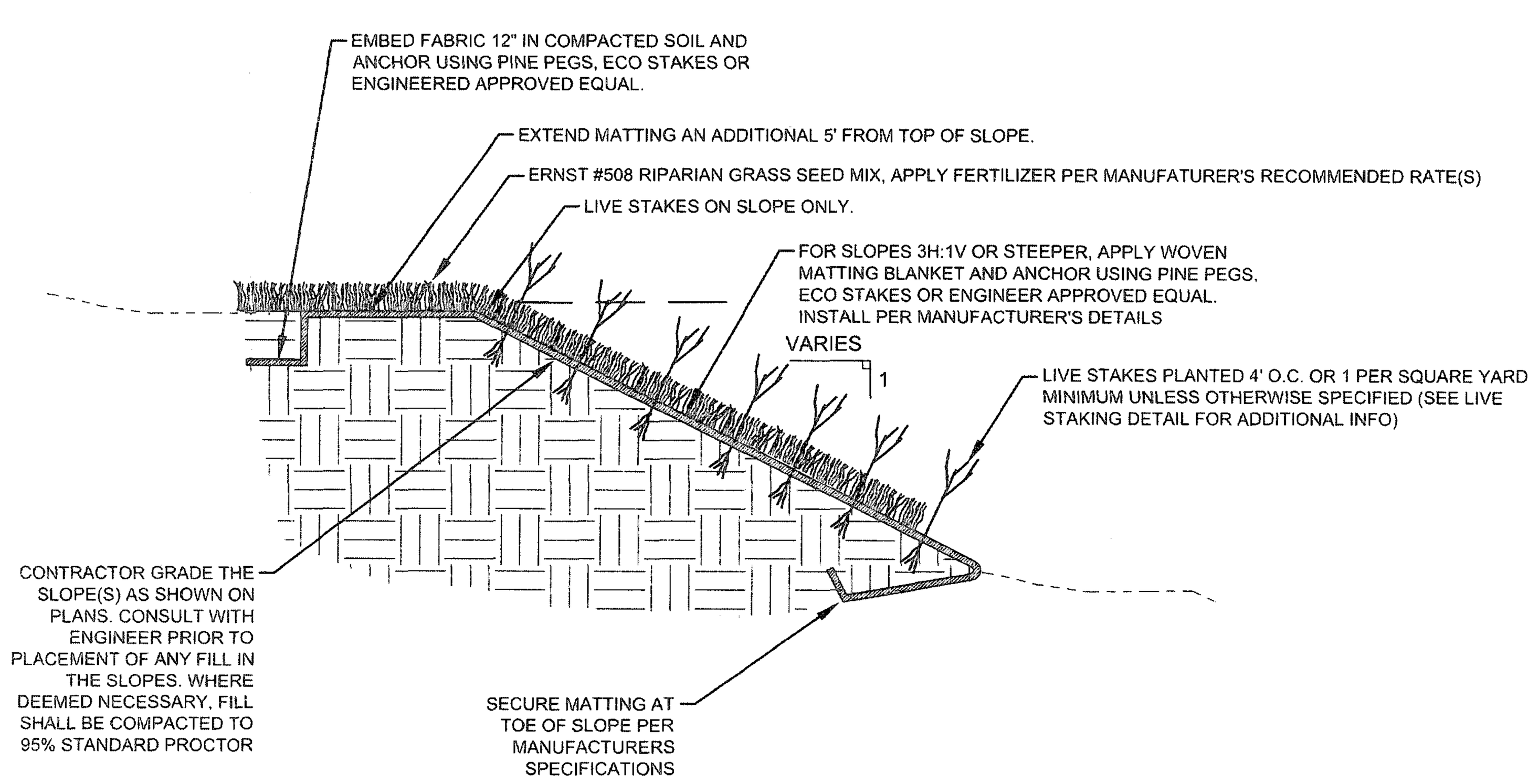


4
C2.00

DETAIL

GDOT 1011A PRECAST REINFORCED MANHOLE

SCALE: N.T.S.

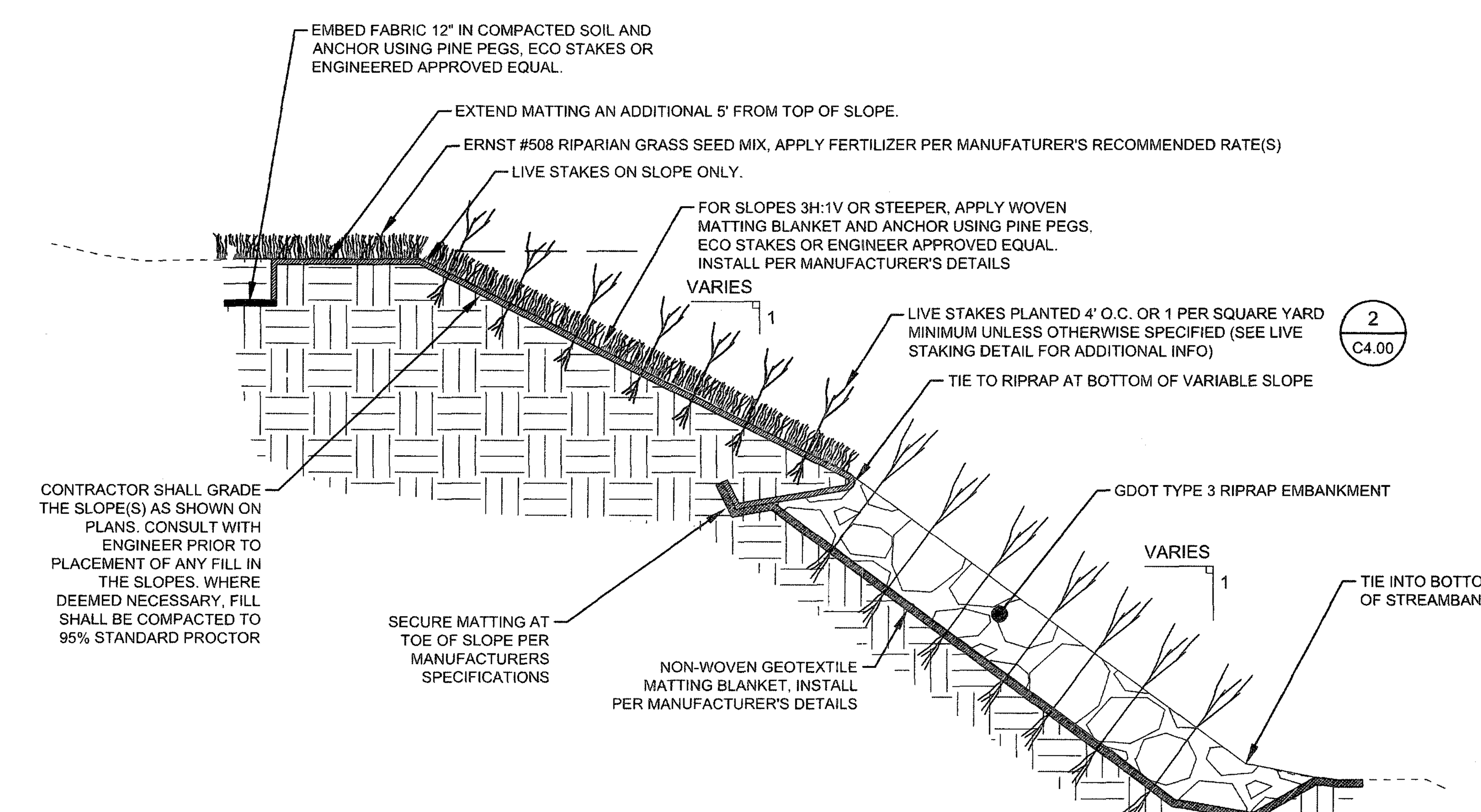


5
C2.00

DETAIL

REGRADE MAT AND PLANT

SCALE: N.T.S.



6
C2.00

DETAIL

RIPRAP REGRADE MAT PLANT

SCALE: N.T.S.

Sandy Springs, GA
OCT 07 2019
Permitted
Director
Community Development Department

NORTH POWERS FERRY ROAD - PHASE 1

A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
1 GALAMBOS WAY
SANDY SPRINGS, GA 30328
PHONE: (770) 730-5600

CITY OF SANDY SPRINGS
FULTON COUNTY
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▣ 350 RESEARCH COURT ▣ PEACHTREE CORNERS, GEORGIA 30092 ▣ (770) 451-2741 ▣ FAX (770) 451-3915 ▣

REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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CONSTRUCTION DETAILS

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

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GEORGIA REGISTERED No. 34209 PROFESSIONAL ENGINEER NEIL M. SCHAAP
08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C4.01
SHEET

18" CLASS III RCP, SEE PIPE PROFILE ON C2.00 FOR DETAILS

TABLE NO. 1 ROUND PIPE - CONCRETE - CORRUGATED STEEL - CORRUGATED ALUMINUM

MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	1 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	PIPE DIAMETER (INCHES)
12	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		12
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075	
15	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		15
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.105	
18	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		18
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.105	.105	.105	.105	
24	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		24
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	
	ALUM	12	.060	.060	.060	.075	.075	.075	.075	.105	.105	.105	.105		
30	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		30
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	
	ALUM 1	12	.075	.075	.075	.075	.075	.105	.105	.105	.135	.135			
36	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		36
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	.138	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	
	ALUM 1	12	.075	.105	.105	.105	.105	.105	.135	.135	.135	.135			
	ALUM 2	12	.060	.060	.060	.060	.075	.075	.105	.105	.105	.135			
42	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		42
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.109	.138	
	ALUM	12	.105	.105	.135	.135	.164	.164							
	ALUM 2	12	.060	.060	.060	.075	.075	.105	.105	.105	.135	.135			
48	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		48
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	
	ALUM 1	12	.105	.105	.135	.164	.164	.164							
	ALUM 2	12	.060	.060	.060	.075	.075	.105	.105	.135	.135	.164	.164		
54	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		54
	STEEL 1	12	.079	.079	.079	.079	.079	.079	.079	.109	.138	.138	.168		
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168	
	ALUM 1	15	.105	.105	.135	.164	.164	.164							
	ALUM 2	15	.060	.060	.060	.075	.075	.105	.135	.135	.164	.164			
60	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		60
	STEEL 1	12	.109	.109	.109	.109	.109	.109	.109	.109	.138	.168			
	STEEL 2	12	.064	.064	.064	.064	.064	.079	.079	.109	.138	.138	.168	.168	
	ALUM 1	15	.135	.135	.164	.164	.164	.164							
	ALUM 2	15	.060	.060	.075	.105	.105	.135	.135	.164	.164				
66	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V			66
	STEEL 1	12	.138	.138	.138	.138	.138	.138	.138	.138	.168	.168			
	STEEL 2	12	.064	.064	.064	.064	.064	.079	.109	.109	.138	.168	.168		
	ALUM 1	16	.164	.164	.164	.164	.164								
	ALUM 2	16	.075	.075	.105	.105	.135	.135	.164	.164					
72	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V			72
	STEEL	12	.138	.138	.138	.138	.138	.138	.138	.138	.168				
	STEEL 2	12	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168			
	ALUM	18	.164	.164	.164	.164	.164								
	ALUM 2	18	.075	.075	.105	.105	.135	.164	.164	.164					
78	CONCRETE	12	III	III	IV	V	V	V	V	V	V				78
	STEEL 1	15	.168	.168	.168	.168	.168	.168	.168	.168					
	STEEL 2	15	.064	.064	.064	.064	.079	.109	.109	.138	.168	.168			
	ALUM 2	21	.075	.075	.105	.105	.135	.164	.164						
84	CONCRETE	12	III	III	IV	V	V	V	V	V	V				84
	STEEL 1	15	.168	.168	.168	.168	.168	.168	.168	.168					
	STEEL 2	15	.064	.064	.064	.079	.079	.109	.109	.138	.168				
	ALUM 2	21	.105	.105	.105	.135	.135	.164	.164						
90	CONCRETE	12	III	III											90
	STEEL 2	18	.064	.064	.064	.079	.109	.109	.138	.138	.168				
	ALUM 2	24	.105	.105	.135	.135	.164								
96	CONCRETE	12	III	III											96
	STEEL 2	18	.079	.079	.079	.079	.109	.109	.138	.168					
	ALUM 2	24	.105	.105	.135	.135	.164								
102	CONCRETE	12	III	III											102
	STEEL 2	24	.079	.079	.079	.109	.109	.138	.138	.168					
	ALUM 2	24	.135	.164	.164										
108	CONCRETE	12	III	III											108
	STEEL 2	24	.109	.109	.109	.109	.109	.138	.138	.168					
	ALUM 2	24	.135	.164											
114	CONCRETE														114
	STEEL 2	24	.109	.109	.109	.109	.109	.138	.168						
	ALUM 2	24	.164	.164											
120	CONCRETE														120
	STEEL 2	24	.109	.109	.109	.109	.138	.138	.168						
	ALUM 2	24	.164	.164											

IMPERFECT BACKFILL IS NOT REQUIRED FOR CONDITIONS SHOWN ON THE LEFT SIDE OF THE HEAVY LINE. USE NORMAL BACKFILL.

FOR CONDITIONS TO THE RIGHT OF THE HEAVY LINE, CLASS V CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO DETAIL "A" OR "B" ON SHEET 1 OF 3.

TABLE NO. 2 - INFORMATION ONLY

	COR. METAL THICKNESS	EQUIVALENT GAGE
STEEL	.064	16
	0.079	14
	0.109	12
	0.138	10
	0.168	8
ALUMINUM	0.060	16
	0.075	14
	0.105	12
	0.135	10
	0.164	8

STEEL 1 OR ALUM 1 DENOTES CORRUGATION PROFILE 2 2/3" X 1/2"

STEEL 2 OR ALUM 2 DENOTES CORRUGATION PROFILE 3" X 1" (OR 5" X 1" FOR STEEL PIPE ONLY)

ALL STEEL AND ALUMINUM PIPE SHALL BE LOCK-SEAM OR WELDED-SEAM (HELICAL) CONSTRUCTION.

MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

TRENCH CONSTRUCTION IS REQUIRED FOR CONDITIONS ON BOTH SIDES OF HEAVY LINE. SEE SHEET 1 OF 3.

FOR CONDITIONS TO RIGHT OF HEAVY LINE, CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO SPECIFICATIONS AND THIS STANDARD.

TABLE VALUES FOR ALUMINUM CORRUGATED PIPE (OR ALUMINUM SPIRAL RIB PIPE) ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, fy=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (fy=20,000 PSI), THE TABLE NO. 1 ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:

A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 INCHES BECOMES 13.8 INCHES)
B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FEET BECOMES 29.7-34.0 FEET)

BY	REVISION	DATE
	GEN. REV. NOTES	9-28-01
GJP	ADDED SEAM CONST. NOTE	3-9-99

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 2 OF 3
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)
NO SCALE — OCTOBER 21, 1998
NUMBER 1030D

STATE: GA. | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS

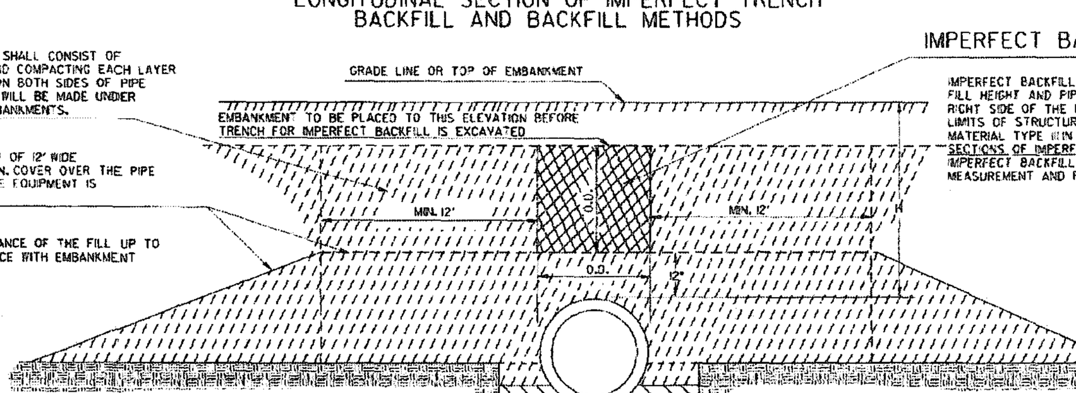
NORMAL BACKFILL

BACKFILL, AS SHOWN BY THE BROKEN LINE SECTIONS, SHALL CONSIST OF PLACING COMPACTABLE SOIL IN 6" (LOOSE) LAYERS AND COMPACTING EACH LAYER (ACCORDING TO GEORGIA STANDARD SPECIFICATIONS) ON BOTH SIDES OF PIPE FOR ITS FULL LENGTH. MEASUREMENT AND PAYMENT WILL BE MADE UNDER ROADWAY EXCAVATION ITEMS FOR FORMATION OF EMBANKMENTS.

NORMAL EMBANKMENT SHALL BE PLACED A MINIMUM OF 12" WIDE ON EACH SIDE OF THE PIPE AND AT LEAST THE MIN. COVER OVER THE PIPE AND COMPACTED TO THE REQUIRED DENSITY BEFORE EQUIPMENT IS ALLOWED TO CROSS.

AFTER BACKFILL HAS BEEN COMPACTED, THE BALANCE OF THE FILL UP TO GRADE LINE SHALL BE CONSTUCTED IN ACCORDANCE WITH EMBANKMENT SPECIFICATIONS

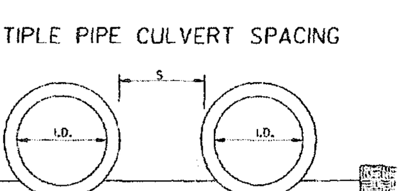
LONGITUDINAL SECTION OF IMPERFECT TRENCH BACKFILL AND BACKFILL METHODS



IMPERFECT BACKFILL

IMPERFECT BACKFILL WILL BE USED WITH CONCRETE PIPE IF FILL HEIGHT AND PIPE DIAMETER IN TABLE NO. 1 FALLS ON THE RIGHT SIDE OF THE HEAVY LINE. CROSS HATCHED AREA SHOWS LIMITS OF STRUCTURE EVACUATION AND IMPERFECT BACKFILL MATERIAL TYPE III IN THIS VIEW. SEE DETAILS BELOW CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL FOR LIMITS OF IMPERFECT BACKFILL AS MEASURED OVER THE PIPE LENGTHWISE. MEASUREMENT AND PAYMENT WILL BE CONFINED TO THESE LIMITS.

MULTIPLE PIPE CULVERT SPACING

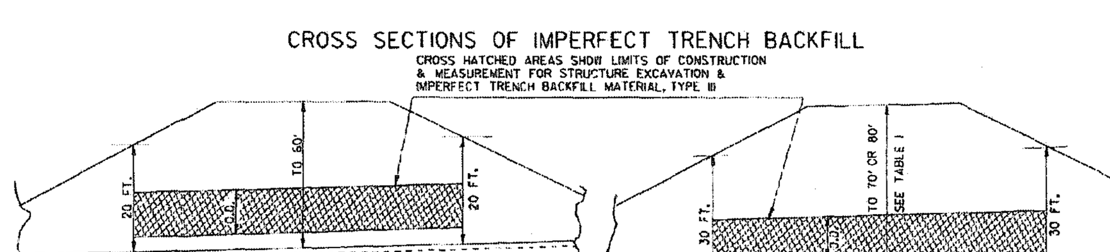


S=ONE INSIDE DIAMETER OF PIPE, OR 3 FEET, WHICHEVER IS SMALLER.
FOR PIPE ARCH CULVERTS, SUBSTITUTE SPAN FOR INSIDE DIAMETER.

NOTE:
FOR MULTIPLE LINES OF C.M. PIPE WITH METAL FLARED END SECTIONS, S MAY BE INCREASED ENOUGH TO AVOID OVERLAP OF END SECTION WINGTIPS. LOCATION OF METAL END SECTION SHOULD BE DETERMINED BEFORE PLACEMENT OF PIPE.

CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL

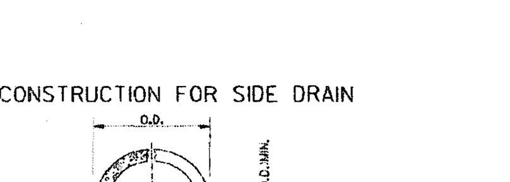
CROSS HATCHED AREAS SHOW LIMITS OF CONSTRUCTION & MEASUREMENT FOR STRUCTURE EXCAVATION & IMPERFECT TRENCH BACKFILL MATERIAL, TYPE III



DETAIL "A" (FOR CONCRETE PIPE DIAMETERS 78" & 84", WITH FILL HEIGHTS OVER 20 FT.)

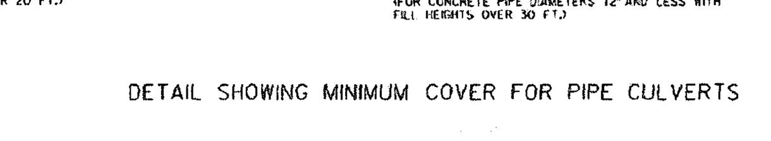
DETAIL "B" (FOR CONCRETE PIPE DIAMETERS 72" AND LESS WITH FILL HEIGHTS OVER 30 FT.)

TRENCH CONSTRUCTION FOR SIDE DRAIN

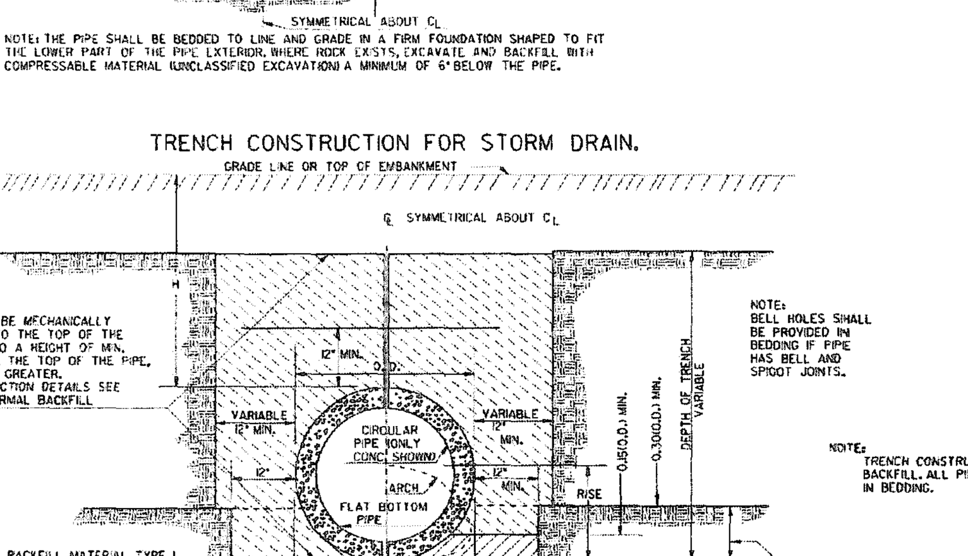


NOTE: THE PIPE SHALL BE BEDDED TO LINE AND GRADE IN A FIRM FOUNDATION SHAPED TO FIT THE LOWER PART OF THE PIPE EXTERIOR. WHERE ROCK EXISTS, EXCAVATE AND BACKFILL WITH COMPRESSABLE MATERIAL (UNCLASSIFIED EXCAVATION) A MINIMUM OF 6" BELOW THE PIPE.

DETAIL SHOWING MINIMUM COVER FOR PIPE CULVERTS



TRENCH CONSTRUCTION FOR STORM DRAIN.



BACKFILL TO BE MECHANICALLY COMPACTED TO THE TOP OF THE TRENCH OR TO A HEIGHT OF MIN. COVER ABOVE THE TOP OF THE PIPE, WHICHEVER IS GREATER. FOR CONSTRUCTION DETAILS SEE NOTE FOR NORMAL BACKFILL

FOUNDATION BACKFILL MATERIAL TYPE I, WHEN REQUIRED SHALL BE CLASS I, OR II SOILS APPROVED FOR USE BY THE ENGINEER. THE MATERIAL TO BE USED WILL BE OBTAINED AS UNCLASSIFIED EXCAVATION OR BORROW FROM LOCATIONS APPROVED BY THE ENGINEER.

FOR EXCAVATION FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN AND RISE FOR OUTSIDE DIAMETER OF PIPE IN HORIZONTAL AND VERTICAL DIMENSIONS SPECIFIED IN DETAIL.

NOTE: PIPE SHALL BE BEDDED IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

NOTE: WHERE AN INCOMPRESSABLE FOUNDATION EXISTS, EXCAVATE AN ADDITIONAL 6". WHERE AN UNSTABLE FOUNDATION MATERIAL IS ENCOUNTERED, EXCAVATE AN ADDITIONAL DEPTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER

NOTE: BELL HOLES SHALL BE PROVIDED IN BEDDING IF PIPE HAS BELL AND SPIGOT JOINTS.

NOTE: TRENCH CONSTRUCTION IS REQUIRED FOR BOTH NORMAL OR IMPERFECT BACKFILL. ALL PIPES WITH BELL & SPIGOT JOINTS SHALL HAVE BELL HOLES IN BEDDING.

NOTE:
1. FOR FILL HEIGHT TABLES SEE SHEET 2 OF 3 AND SHEET 3 OF 3.
2. ONLY ONE CLASS OR THICKNESS OF PIPE WILL BE SPECIFIED FOR EACH INDIVIDUAL LOCATION. THE CLASS OR THICKNESS WILL BE DETERMINED BY THE MAXIMUM HEIGHT OF FILL.

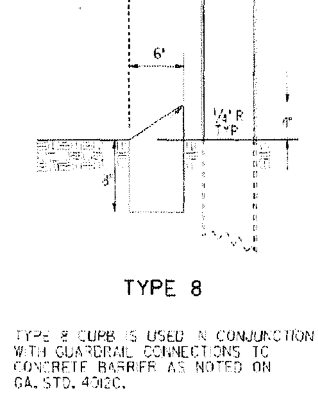
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 1 OF 3
(TRENCH CONSTRUCTION, BEDDING, BACKFILLING)
NO SCALE — REV. & REDR.: SEPT., 2001
(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) CHIEF ENGINEER
NUMBER 1030D

7 / C2.00
DETAIL
GDOT 1030D CULVERT EMBEDMENT
SCALE: N.T.S.

Sandy Springs, GA
OCT 07 2019
Permitted
Director
Community Development Department

NOTE:
IF CONCRETE MEDIAN INTERCEPTS PEDESTRIAN CROSSWALKS, WHEELCHAIR RAMPS (CONSTRUCTION DETAIL A-3 AND A-4) WILL BE REQUIRED.

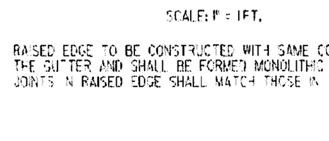
STATE: GA. | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS



TYPE 8

TYPE 8 CURB IS USED IN CONJUNCTION WITH GUARDRAIL CONNECTIONS TO CONCRETE BARRIER AS NOTED ON GA. STD. 4012C.

RAISED EDGE WITH CONCRETE GUTTER

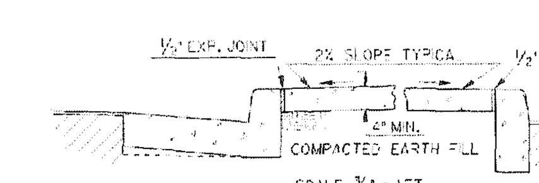


SCALE: 1" = 1 FT.

RAISED EDGE TO BE CONSTRUCTED WITH SAME CONCRETE MIX AS THE GUTTER AND SHALL BE FORMED MONOLITHIC WITH GUTTER. JOINTS IN RAISED EDGE SHALL MATCH THOSE IN THE GUTTER.

CONCRETE MEDIAN (Between Curbs)

NOTE: CURB TYPES SHOWN ARE TYPICAL. OTHER TYPES MAY BE SPECIFIED.



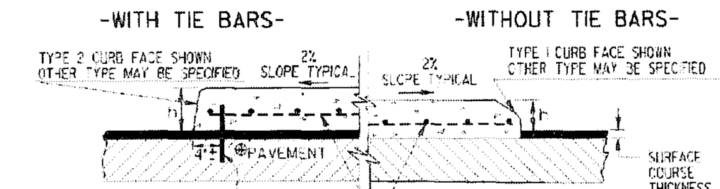
SCALE: ¾" = 1 FT.

NOTE: WIDTH OF CONCRETE MEDIAN WILL BE AS SHOWN IN PLANS

CONCRETE MEDIANS (Integral)

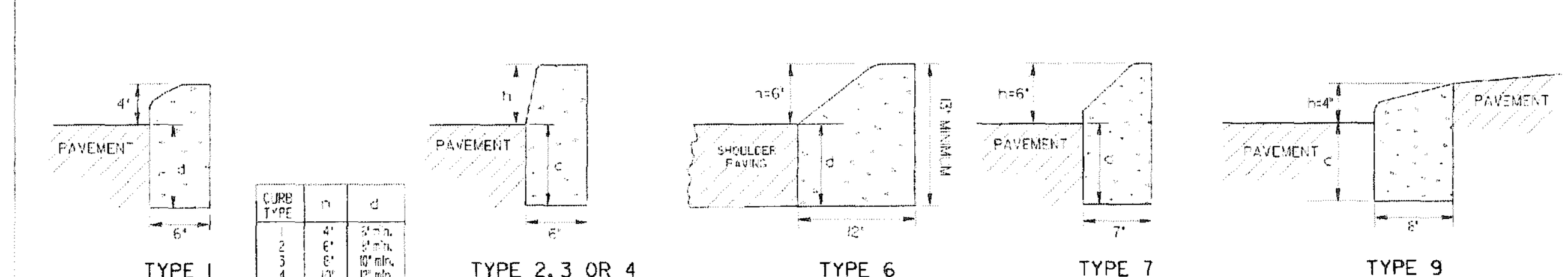
SCALE: 1" = 1 FT.

-WITH TIE BARS- / -WITHOUT TIE BARS-



NOTE:
IF FINAL SURFACE COURSE IS PRESENT OR MUST BE INSTALLED BEFORE THE CONCRETE MEDIAN CAN BE INSTALLED, THEN DOWELED IN CONCRETE MEDIAN IS REQUIRED.

CONCRETE HEADER CURBS



TYPE 1 — TYPE 2, 3 OR 4 — TYPE 6 — TYPE 7 — TYPE 9 TRUCK APRON IN ROUNDABOUTS

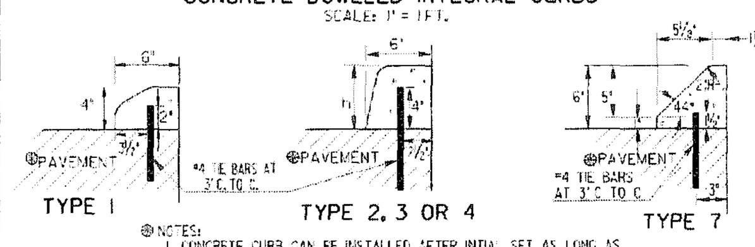
CURB TYPE	h	d
1	4"	8" min.
2	6"	8" min.
3	8"	10" min.
4	10"	12" min.
6	6"	7" min.
7	6"	8" min.
9	4"	8" min.

THE DIMENSION d MAY BE INCREASED AT CONTRACTOR'S OPTION SO BOTTOM OF HEADER CURB WILL ALIGN WITH BOTTOM OF PAVEMENT TYPICAL SECTION.

SCALE: 1½" = 1 FT.

CONCRETE DOWELED INTEGRAL CURBS

SCALE: 1" = 1 FT.



TYPE 1 — TYPE 2, 3 OR 4 — TYPE 7

NOTES:
1. CONCRETE CURB CAN BE INSTALLED AFTER INITIAL SET AS LONG AS TIE BARS ARE DRILLED INTO UNDERLAYING CONCRETE PAVEMENT.
2. CONCRETE CURB CAN BE INSTALLED BEFORE INITIAL SET WITH DOWELS THAT ARE DRIVEN INTO UNDERLYING CONCRETE PAVMENT.
3. JOINTS IN CURB AND CONCRETE MEDIAN WILL MATCH THOSE IN THE CONCRETE PAVEMENT.
4. ALL TYPES OF CONCRETE CURB CAN BE PLACED ON ASPHALT PAVEMENTS WHERE TIE BARS MAY BE EITHER DRIVEN OR DRILLED INTO THE UNDERLYING PAVEMENT. CONTRACTION JOINTS SHALL BE CONSTRUCTED IN CURB OR CONCRETE MEDAIN AT 20 FT. SPACING.

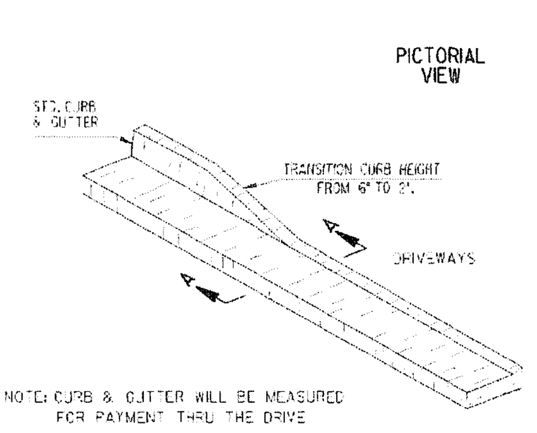
MINIMUM TIE BAR LENGTHS (FOR CONC. DOWELED CURBS OR CONC. MEDIAN)

CURB TYPE	P.C. CONC. PAV.	ASPHALT PAV.
1	6"	8"
2, 3 or 4	8"	12"
7	6"	8"

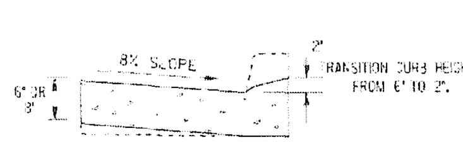
NOTE:
TIE BARS FOR DOWELED CURBS MAY BE UNCOATED PLAIN OR DEFORMED BILLET-STEEL BARS (GRADE 40) AS USED FOR CONCRETE REINFORCEMENT. (AASHTO M-31)

DETAILS OF RECESSED CURB FOR DRIVEWAYS

NO SCALE



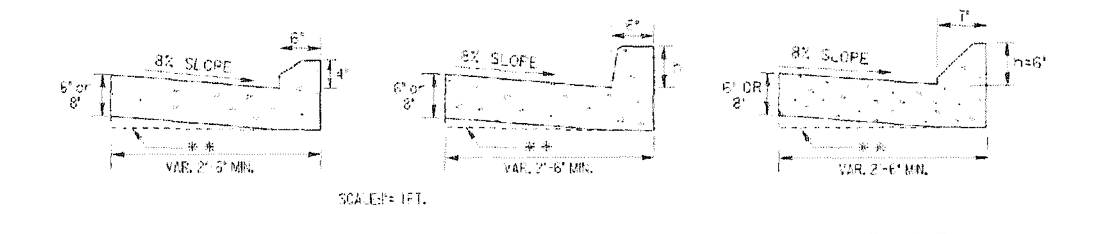
NOTE: CURB & GUTTER WILL BE MEASURED FOR PAYMENT THRU THE DRIVE



SECTIONAL VIEW
SECTION A-A

(SEE SEPARATE CONSTRUCTION DETAILS FOR DRIVEWAYS)

CONCRETE CURB & GUTTER

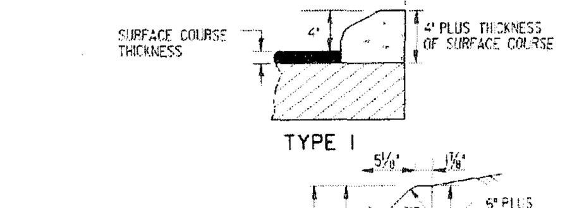


SCALE: 1" = 1 FT.

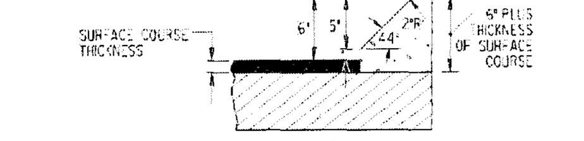
TYPE 1 — TYPE 2, 3 OR 4 — TYPE 7

** AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OR BASE COURSE, BUT THE GUTTER THICKNESS MUST NOT BE LESS THAN THE SPECIFIED 6" OR 8" AT ANY POINT.

CONCRETE INTEGRAL CURB

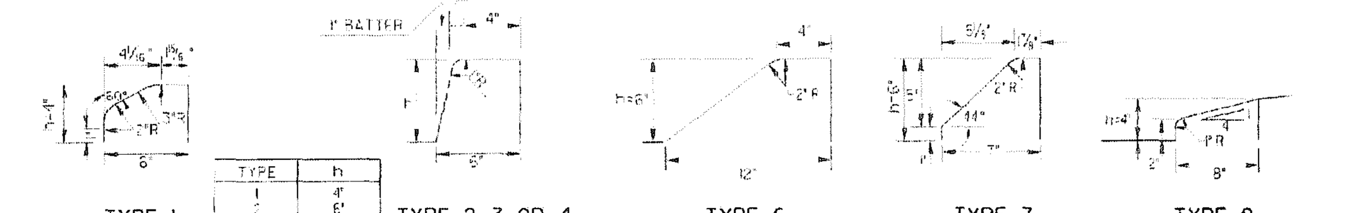


TYPE 1



TYPE 7 — SCALE: ½" = 1 FT.

CURB FACE DESIGN



TYPE 1 — TYPE 2, 3 OR 4 — TYPE 6 — TYPE 7 — TYPE 9

TYPE	h
1	4"
2	6"
3	8"
4	10"
6	6"
7	6"
9	4"

SCALE: 2" = 1 FT.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
CONCRETE CURB & GUTTER
CONCRETE CURBS, CONCRETE MEDIANS
SCALE: AS SHOWN — REVISED AND REDRAWN OCT. 2011
(SUBMITTED) STATE DESIGN POLICY ENGINEER (APPROVED) CHIEF ENGINEER
NUMBER 9032B

8 / C2.00
DETAIL
GDOT 9032B CURB & GUTTER
SCALE: N.T.S.

NORTH POWERS FERRY ROAD - PHASE 1

A STREAMBANK REPAIR & CULVERT REPLACEMENT PROJECT
FOR
CITY OF SANDY SPRINGS
1 GALAMBOS WAY
SANDY SPRINGS, GA 30328
PHONE: (770) 730-5600

CITY OF SANDY SPRINGS
FULTON COUNTY
GEORGIA

LAND LOT 175
3rd DISTRICT

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REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	8-6-19	NS	CITY COMMENTS

SANDY SPRINGS PROJECT #17-002

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CONSTRUCTION DETAILS

SCALE: N/A
DATE: 11/12/2018
PROJECT: 16230.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

08/07/2019

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 0000067548 EXP. 12/21/2021

C4.02
SHEET

J:\16230000\D\PHASE 1_Plansheets\C4.00 - CONSTRUCTION DETAILS - 1623000.dwg - GLam - 9/12/2019 10:15 AM